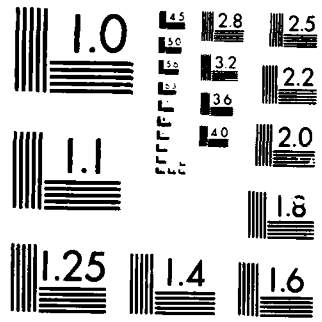
AD-A164 421 STRUCTURAL CONCEPT ANALYSIS REPORT FOR THE EAST COAST AIR COMBAT MANEUVER..(U) CREST ENGINEERING INC TULSA OK MAY 76 27-771-92-APP-C CHES/NAVFAC-FPO-7601-APP-C 1/7

UNCLASSIFIED N62477-76-C-0179 F/G 13/13 NL



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS 1963-A

AD-A164 421

CREST

CREST ENGINEERING, INC.
TULSA, OKLAHOMA
U.S.A.

86 2 3 026

RE: Distribution Statement, Contract N72477-76-C-0179, Appendixes A, C and D
Approved for Public Release, Distribution Unlimited.
Per Ms. Jacqueline B. Riley, Naval Facilities Engineering Command, Code FPO-1

STRUCTURAL CONCEPT ANALYSIS REPORT

FOR THE

EAST COAST AIR COMBAT MANEUVERING RANGE

OFFSHORE KITTY HAWK, NORTH CAROLINA

CONTRACT NO. N62477-76-C-0179

REPORT NO. 27-771-92

APPENDIX C. THREE-PILE CONCEPT CALCULATIONS

Prepared for

NAVAL FACILITIES ENGINEERING COMMAND
DEPARTMENT OF THE NAVY
CHESAPEAK DIVISION

By

CREST ENGINEERING, INC.
TULSA, OKLAHOMA

May 1976

DISCLAIMER NOTICE

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SECTION 1

INTRODUCTION

1.1 INTRODUCTION

The major objective of this report is to establish an optimized three-pile ocean structure for the U.S. Navy Air Combat Maneuvering Range (ACMR) offshore North Carolina, U.S.A. This report constitutes a portion of the project report on the Structural Concept Analysis.

The function of this report is, therefore, to optimize a three-pile ocean structure so as to refelct a minimum steel weight under the environmental conditions compatible with those used previously in the design of skirt-pile structures.

The conceptual structure considered herein, a three-pile structure with equilaterally spaced jacket legs, is designed for a water depth of 84 feet (MLW). The anchoring of the structure is to be achieved by driving piles through the jacket legs into the seabed. Securing of the jacket is then accomplished by welding of shim plates along the annulus between the jacket leg and piling at the top of the jacket legs. A superstructure consisting of an equipment deck and a top deck will be installed to the piling above the jacket. A boat landing is to be furnished with the jacket. A set of stairways attached to the superstructure shall be furnished to provide connections among the boat landing, equipment deck and the top deck.

In order to attain the stated objective, a system optimization technique is employed in the course of establishing major structural member sizes and dimensions. An objective function of a minimum steel weight is formulated by treating the jacket base spacing as the univariable parameter subjected to the constraints of the drivability and axial load capacity of the piling. The selected structure is then analyzed to examine the member stresses and the reactions on the piling. The computation of the corrosion protection requirements follows. Finally, a three-pile ocean structure with piling size of 36 inches outside diameter and the jacket leg base spacing of 58 feet is established. The structure weighs approximately 500 tons.

1.2 DESIGN CRITERIA

Design criteria presented herein serve as guide lines in the conceptual development of the proposed three-pile structure. These criteria are listed as follows:

A. Environmental Criteria

MLW Depth	84 ft.
Storm Wave Height	62 ft.
Storm Wave Period	12 sec.
Maximum Storm Tide	10 ft.
Maximum Astronomical Tide	4 ft.
Maximum Current (for full depth)	5.4 ft./sec.
Wind Velocity	150 Knots @ (+)30 ft.

The approach of the storm wind and waves can be from any direction.

B. Foundation Criteria

(1) The basis for the foundation design is a McClelland report to Cubic Corporation entitled "Foundation Investigation East Coast ACMR Ocean Structures, Volume I". The soil information to be used in this analysis is one boring at Site No. 1 in the aforementioned report.

(2) Due to the nature of the sea bottom, and sea bottom currents, scouring of 5 feet below mudline will be used in the preliminary piling design to develop the theoretical soil resistance to laterally applied loads.

C. Live Loads

The live loads shall be as follows:

Equipment Deck	150 psf
Top Deck	100 psf

The loads shall be distributed uniformly over the entire deck areas.

D. Material

All structural shapes or fabricated tubular goods are assumed to be ASTM A-36 or equal.

E. Corrosion Protection

(1) All portions of the platform above elevation (-)4' - 0" shall be painted.

(2) All main structural members located within the splash zone shall have an extra 1/2 inch of sacrificial steel added to their wall thickness. This can be in the form of extra wall thickness or a 1/2 inch steel plate wrap.

(3) The portion of the platform below elevation (-)4' - 0" will be protected by cathodic protection. This will be provided by sacrificial anodes having a theoretically expected life of ten years.

F. Miscellaneous

(1) The platform is analyzed as if the annulus between the jacket and piling will be ungrouted.

The criteria employed for determination of structural acceptability are specified by the documents:

(a) Specification API RP 2A, Recommended Practice for Planning, Designing and Constructing Fixed Offshore Platforms, 7th Edition, American Petroleum Institute, Dallas, Texas, 1976.

(b) Manual of Steel Construction, 7th Edition, American Institute of Steel Construction, New York, N.Y., 1969.

1.3 DESIGN ASSUMPTIONS

Some assumptions to be used in this analysis are listed as follows:

True batter of piling and jacket leg	1:6
Equipment deck area	500 sq. ft.
Top deck area	1,200 sq. ft.
Spacing between decks	15 ft.

1.4 PROCEDURES OF ANALYSIS

The primary item of concern is the axial loads resulting in the maximum environmental forces. If the maximum required pile capacity is attainable through the available soil information, then the conceptual structure would be considered feasible. In order to obtain such information, Sections 2, 3, and 4 are first developed in this analysis.

A three-pile structure with variable base spacing is then considered under a given set of overturning moment (107,302 ft-kips)* and horizontal force (1,254.6 kips)*. Thus, the relationship between axial pile capacity and jacket base spacing under a set of given loads is established in Section 5.

Section 6 presents a system optimization procedures to select a structure which reflects the minimum steel weight and minimum spacing under the constraints of Sections 2 to 5.

The configuration of the selected structure is proposed (Section 7) and then idealized (Section 8) for further analysis. The basic loading conditions (detailed in Section 9) acting on the structure are computed in accordance with the design criteria. Finally, the selected structure is analyzed as a space frame structure under combinations of various basic loading conditions (Section 10). The structural member stresses from the space frame analysis are compared with the API and AISC Specifications. The structural reactions are again used to check the pile capacity requirements.

* Storm forces from skirt-pile structures under separate contract: Crest Offshore Job No. 27-621-00, to Cubic Corporation.

1.5 DESIGN SUMMARY

Some of the more significant results from the analysis are summarized as follows:

Environmental Forces:

Total wind and wave forces (including boat loading and stairway)	836.7 kips
Total overturning moment (including boat landing and Stairway)	79,573 ft-kips

Pile Axial Loads:

Maximum compressive load	1,858 kips
Maximum tensile load	1,463 kips

Structural Dimensions:

Piling

Outside diameter	36 in.
Penetration below mudline	180 ft.

Jacket

Spacing at mudline	58 ft.
Spacing at work-point level	29 ft.
Height	98 ft. 9 in.

Superstructure

Equipment deck	25 ft. x 20 ft.
Top deck	35 ft. x 35 ft.

Structural Steel Weight

Piling	545,836 lbs.

Superstructure		138,907 lbs.
Jacket		231,130 lbs.
	Total weight (excluding boat landing, stairway and miscellaneous items)	915,923 lbs.

1.6 PERSONNEL RESUMES

The personnel whose resumes follow were actively engaged in this project.

CREST OFFSHORE, INC.

Chingmiin (Charlie) Chern

Senior Engineer

University	Degree	Year
National Taiwan University	Bachelor of Science Civil Engineering	1961
North Dakota State University	Master of Science Civil Engineering	1966
Lehigh University	Ph. D. Civil Engineering	1969
Tulsa University	Graduate Study in Business Administration-Management	1974

Societies, Licenses, and Other Activities:

Member American Society of Civil Engineers
Member International Association of Structural and Bridge Engineers
Member American Society of Engineering Education
Registered Professional Engineer in Oklahoma

Experience:

1973 to Present — Crest Offshore, Inc.

Senior Civil Engineer

Engaged in the feasibility studies, structural analysis and design of offshore structures, equipment supports and other various types of petroleum related civil engineering works. Assignments include:

... Evaluation of engineering designs from other agencies.
... Analysis and design of offshore structures for oil industry.
... Analysis and design of supports and foundations for onshore refinery facilities.
... Development of a sequence of computer programs for the analysis of offshore structures.

Chingmiin (Charlie) Chern

Senior Civil Engineer

Experience Continued:

1969 to 1973	North Dakota State University
Associate Professor of Civil Engineering	Engaged in full-time lecture instruction for civil engineering (graduate school division) and construction management. Also served as consultant to local industry (undergraduate school division) in the area of computer applications in engineering.
1966 to 1969	Fritz Engineering Laboratory
Research Assistant	Assisted in the design and testing of various types of steel structures.
1966	North Dakota State Highway Department
Highway Engineer	Responsible for construction surveying.
1965	U.S. Forest Service
Assistant Crew Chief	Assisted in surveying responsibilities.

SECTION 2

PIPE PILE CAPACITY CURVES

2.1 INTRODUCTION

Axial capacity curves are developed hereinafter for 30", 36", 39" and 42" diameter piling. The method utilized is the emperical procedures, as presented in the McClelland soils report, for pipe piles penetrating through sand and clay alternating strata. The 30" diameter curves are developed to demonstrate the ability to reproduce the McClelland curves and subsequently the same procedure is followed to produce the remaining curves.

2.2 SOIL DATA

Stratification

A generalized summary of the major soil strata at each site based on the log of boring is given in the following tabulations:

Boring 1

Stratum	Penetration, ft From	To	Description
I	0	56	Very dense gray fine sand and silty fine sand
II	56	78	Dense gray silty fine sand
III	78	146	Dense gray fine sand
IV	146	170	Medium dense-to-dense gray silty fine sand
V	170	297.5+	Very stiff brown-to-gray silty clay-to-moderately plastic clay

Boring 2

Stratum	Penetration, ft From	To	Description
I	0	33	Very dense gray fine sand
II	33	45	Very stiff-to-hard gray silty clay
III	45	114	Dense gray silty fine sand-to-silt below 90-ft penetration
IV	114	132	Firm-to-stiff gray silty clay
V	132	190	Medium dense gray sandy silt-to-silt below 160-ft penetration
VI	190	235	Medium dense-to-dense gray silty fine sand
VII	235	290	Very stiff gray silty clay
VIII	290	320.5+	Dense dark gray-to-gray fine sand

Boring 3

Stratum	Penetration, ft From	To	Description
I	0	107	Dense-to-very dense tan-to-gray fine sand
II	107	160	Medium dense silty fine sand-to-sandy silt below 140-ft penetration
III	160	225	Very stiff-to-stiff gray silty clay
IV	225	243	Medium dense silty fine sand
V	243	260	Very stiff gray silty clay
VI	260	280	Dense gray silty fine sand
VII	280	292	Hard gray sandy clay
VIII	292	326.5+	Medium dense gray silty fine sand

Boring 3a

Stratum	Penetration, ft From	To	Description
I	0	175	Very dense-to-medium dense gray fine sand and silty fine sand
II	175	195	Gray clayey silt, slightly sandy
III	195	235	Stiff gray silty clay
IV	235	255	Medium dense-to-dense gray silty fine sand
V	255	275	Hard-to-very stiff gray silty clay
VI	275	289	Dense gray silty fine sand
VII	289	305	Very stiff gray moderately plastic clay
VIII	305	370.5+	Medium dense gray silty fine sand

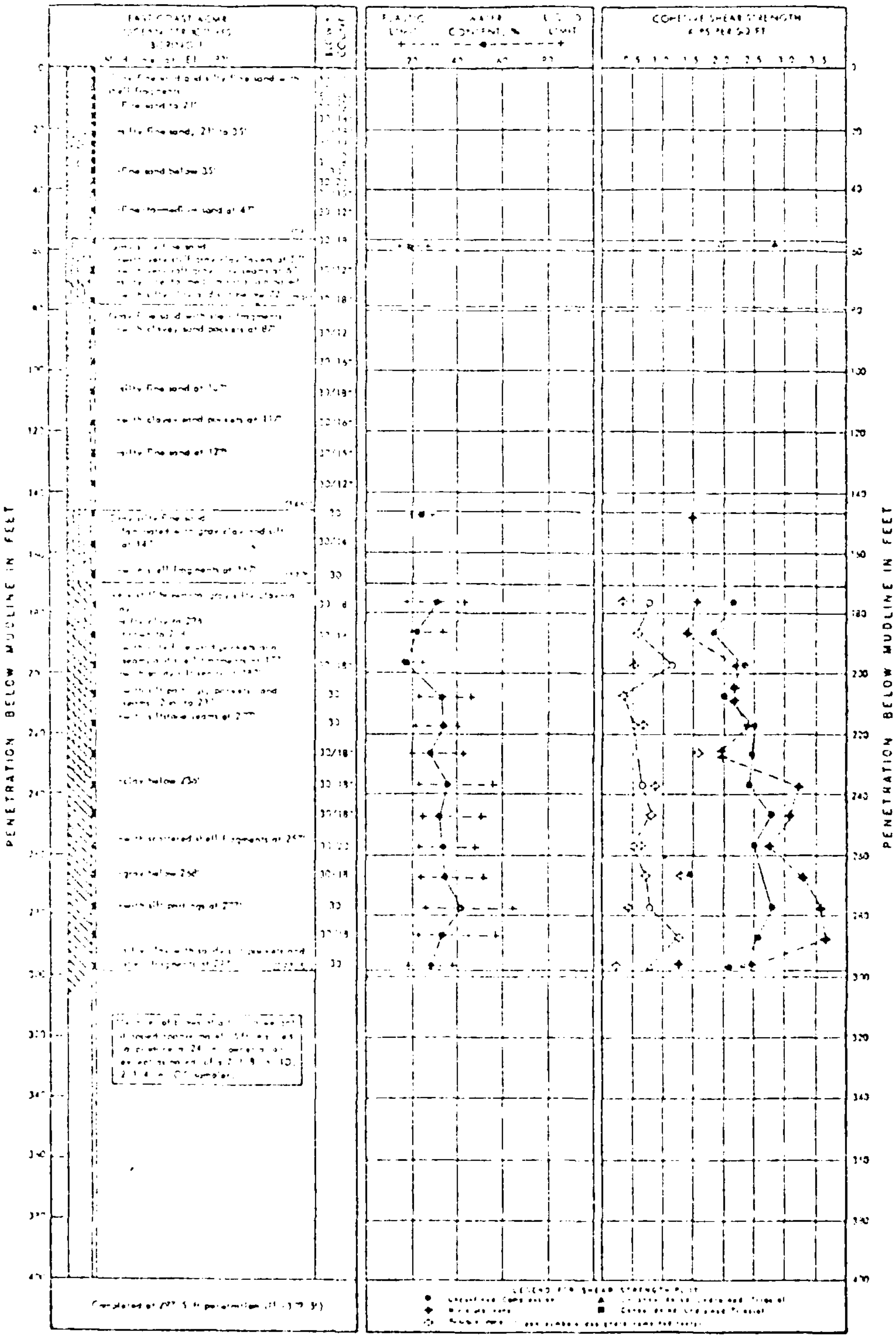
	Boring 4		
	Penetration, ft		
Stratum	From	To	Description
I	0	102	Very dense-to-dense tan-to-gray fine sand
II	102	136	Medium dense gray silt
III	136	170	Medium dense-to-dense gray silty fine sand
IV	170	207	Dense-to-very dense tan-to-gray fine sand
V	207	250	Very stiff gray moderately plastic clay
VI	250	275	Medium dense gray silt
VII	275	330.5+	Very stiff gray silty clay

CREST OFFSHORE, INC.

Sheet ___ of ___

By ___ Check ___ Subject ___

Date ___ Job No. ___ Calculation ___



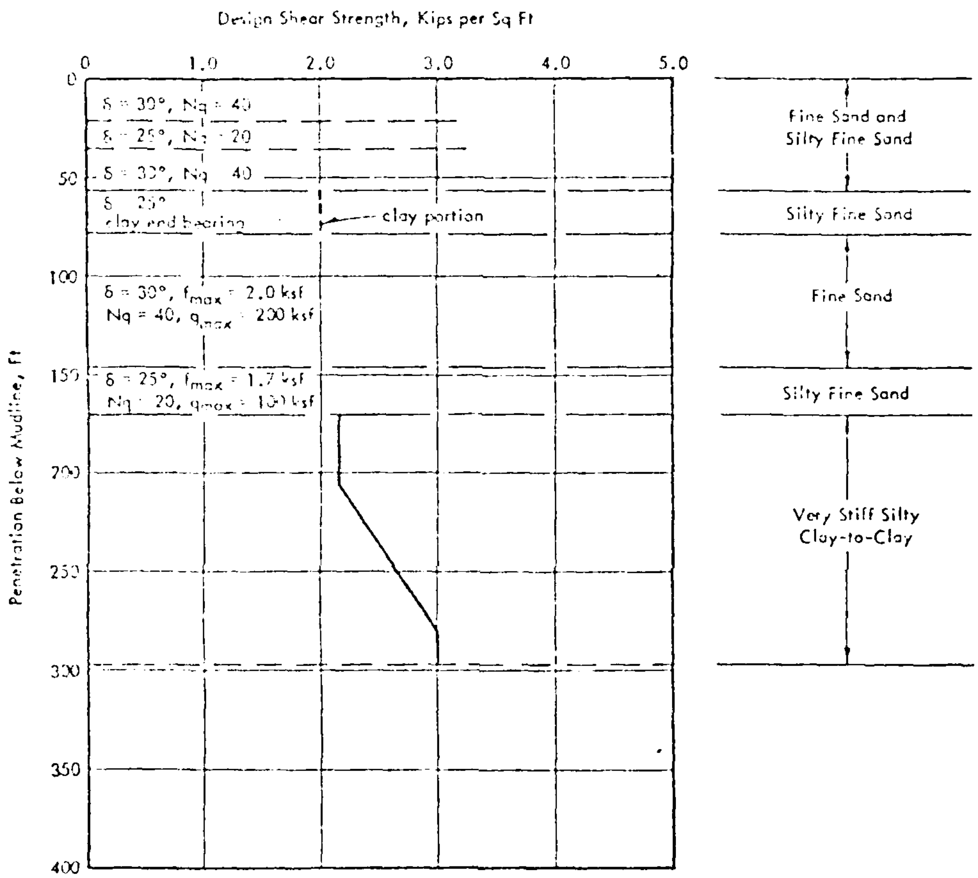
LOG OF BORING AND TEST RESULTS

CREST OFFSHORE, INC.

Sheet [illegible] of [illegible]

By [illegible] Client [illegible] Subject [illegible]

Date [illegible] Job No [illegible] Calculation [illegible]



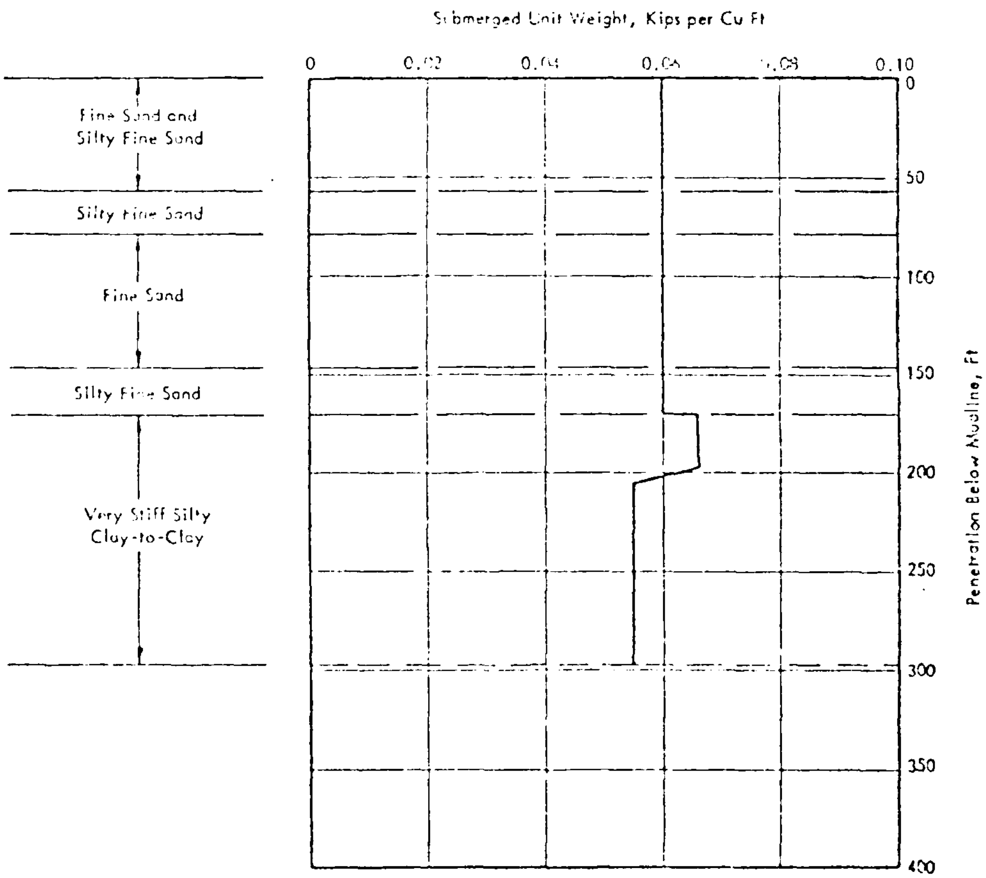
STRENGTH PARAMETERS

CREST OFFSHORE, INC.

Sheet ___ of ___

By ___ Client ___ Subject ___

Date ___ Job No. ___ Calculation ___



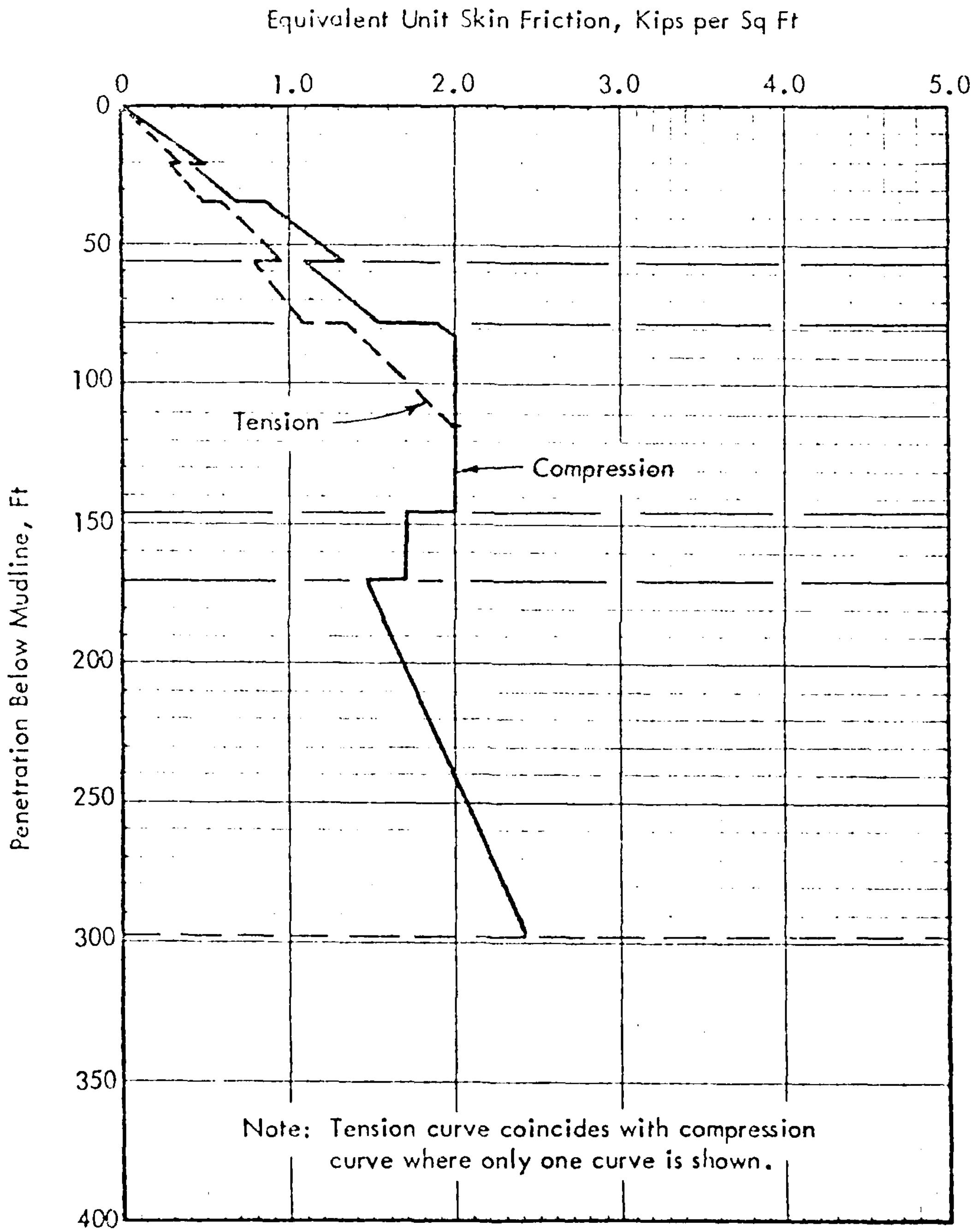
SUBMERGED UNIT WEIGHT

CREST OFFSHORE, INC.

Sheet [illegible] of [illegible]

By [illegible] Client [illegible] Subject [illegible]

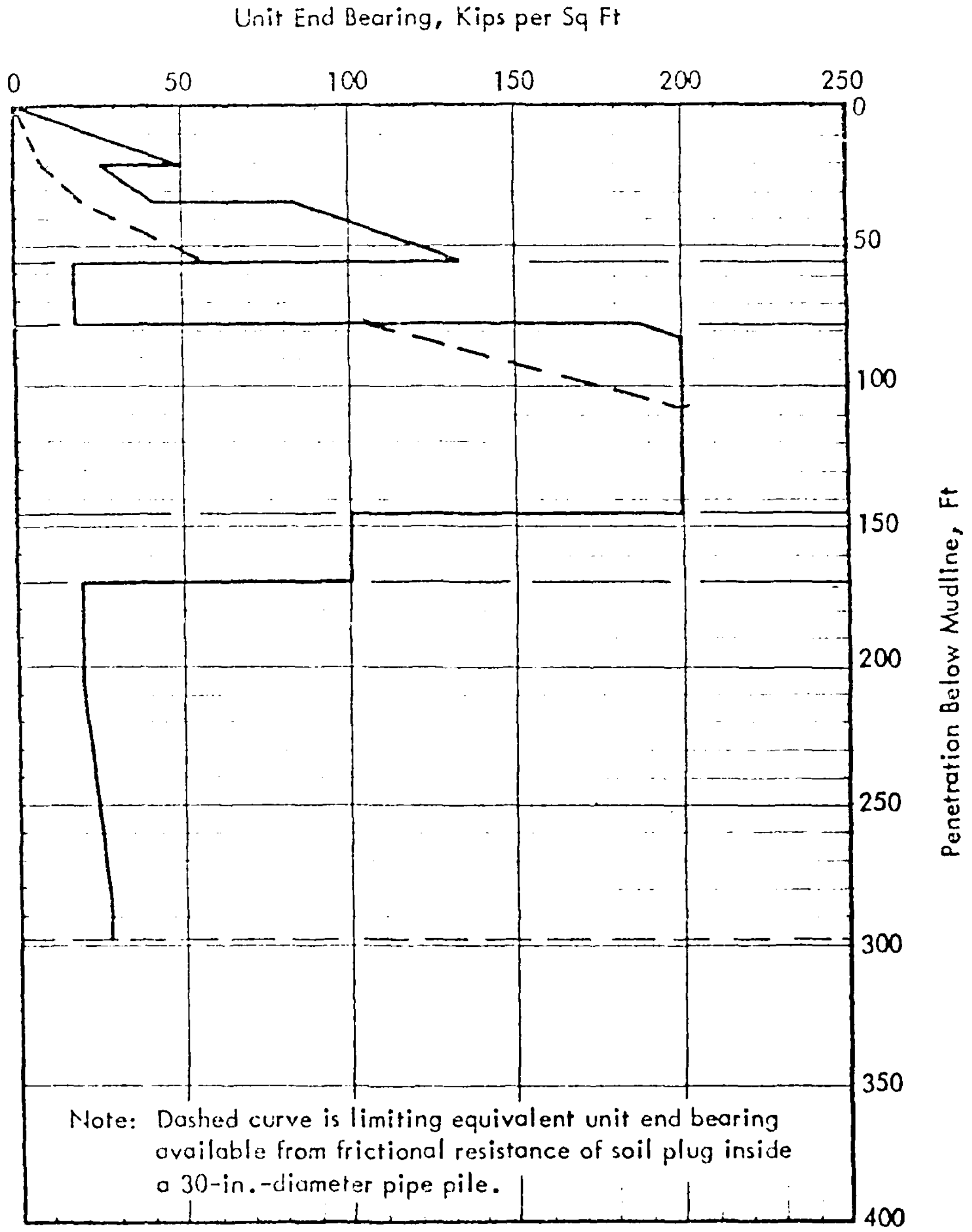
Date [illegible] Job No. [illegible] Calculation [illegible]



EQUIVALENT UNIT SKIN FRICTION

CRESTOFFSHORE, INC. Sheet ... of 41

By ... Client U. S. NAVY Subject ...
Date ... Job No. ... Calculation ...



UNIT END BEARING

PENETRATION BELOW MUDLINE		UNIT SKIN FRICTION		UNIT END BEARING	SEGMENT LENGTH
FT		KSF		KSF	FT
	0	0		0	
20		0.45		9	20
	20		0.40	9	
35		0.67		20	15
	35		0.85	20	
56		1.30		[illegible]	21
	56		1.10	12	
79		1.55		12	23
	79		1.90	100	
82		2.00		115	3
	82	2.00		115	
107		2.00		200	25
	107	2.00		200	
115		2.00		200	8
	115	2.00		200	
145		2.00		200	30
	145		1.70	100	
170		1.70		100	25
	170		1.6[illegible]	20	
205		1.72		20	[illegible]
	205		[illegible]	20	
[illegible]		[illegible]		40	[illegible]
	230		[illegible]	[illegible]	
[illegible]		2.40		[illegible]	20

Σ = 300 ft

UNIT CAPACITY IN COMPRESSION

By C. Chen Client U.S. NAVY Subject Structural Concept Analysis
Date 3-31-76 Job No 27-771-92 Calculation Pipe Pile Capacity Curves

PENETRATION BELOW MUDLINE	UNIT SKIN FRICTION	UNIT END BEARING	SEGMENT LENGTH
FT	KSF	KSF	FT
0 – 20	0 – 0.30	–	20
20 – 35	0.29 – 0.46	–	15
35 – 56	0.60 – 0.95	–	21
56 – 79	0.80 – 1.10	–	23
79 – 82	1.36 – 1.43	–	3
82 – 107	1.40 – 2.00	–	25
107 – 115	2.00 – 2.00	–	8
115 – 145	2.00 – 2.00	–	30
145 – 170	1.70 – 1.70	–	25
170 – 205	1.43 – 1.72	–	35
205 – 280	1.72 – 2.30	–	75
280 – 300	2.30 – [illegible].40	–	20

Σ 300 ft

UNIT CAPACITY IN TENSION

2.3 PILE CAPACITY IN COMPRESSION

$$Q = Q_s + Q_p$$

where Q_s = skin friction on the wall of the pile

Q_p = end bearing

SKIN FRICTION :

For Cohesive Soils

$$Q_s = \lambda (\bar{\sigma}_m + 2 C_m) A_s$$

where $\bar{\sigma}_m$ = mean effective vertical stress between the mudline and the pile tip

C_m = mean undrained cohesive shear strength along the pile length

λ = dimensionless frictional capacity coefficient (function of pile penetration)

A_s = embedded surface area of the pile

Granular Soils

$$Q_s = f A_s$$

where f = the unit skin friction between soil and pile

$$f = K \bar{\sigma}_v \tan \delta$$

K = coefficient of lateral earth pressure

$\bar{\sigma}_v$ = effective vertical stress

δ = angle of friction between soil material and steel pile

Note: $K = 0.7$ for compressive load

$= 0.5$ for tensile load

END BEARING:

$$Q_p = q A_p$$

Cohesive Soils

$$q = c N_c$$

where c = cohesive shear strength

N_c = a dimensionless bearing capacity factor (a value of 9 is assumed)

Granular Soils

$$q = \bar{\sigma}_v N_q$$

where $\bar{\sigma}_v$ = effective vertical stress

N_q = a dimensionless bearing capacity factor which is a function of ϕ, the angle of internal friction of the material

CREST OFFSHORE, INC.

Sheet [illegible] of [illegible]

By [illegible] Client [illegible] Subject [illegible]
Date [illegible] Job No. [illegible] Calculation [illegible]

Skin Friction Capacity ($Q_s = f_{os} A_s$)

--- Compression ---

$O.D. = 30''$

$A_s = \pi D(\Delta l) = 7.854(\Delta l)$ [illegible]

Penetration Below Mudline (ft)	Unit Skin Friction (ksf)	Ave. Unit Skin Friction f_{os} (ksf)	Segment Length (Δl) (ft)	Skin Friction in Segment (kips)	Total Skin Friction (kips)
0 20	0 0.45	0.225	20	35.3	35.3
20 35	0.40 0.67	0.535	15	62.0	95.5
35 56	0.85 1.30	1.075	21	177.3	275.9
56 79	1.10 1.65	1.375	23	248.4	524.2
79 82	1.90 2.00	1.950	3	45.9	570.1
82 107	2.00 2.00	2.00	25	392.7	962.8
107 115	2.00 2.00	2.00	8	125.7	1,088.5
115 145	2.00 2.00	2.00	30	471.2	[illegible]
145 170	1.70 1.70	1.70	25	333.8	[illegible]
170 205	1.48 1.72	1.60	35	439.8	2,333.3
205 280	1.72 2.30	2.01	75	1,184.0	3,517.3
280 300	2.30 2.40	2.35	20	364.1	[illegible]
			$\Sigma = 300$ ft		

Skin Friction Capacity ($Q_s = f_{as} A_s$)

--- Compression ---

O.D. = 36"

$A_s = \pi D(\Delta l) = 9.425(\Delta l)$ sq.ft

Penetration Below Mudline (ft)	Unit Skin Friction (KSF)	Ave. Unit Skin Friction f_{as} (KSF)	Segment Length (Δl) (FT)	Skin Friction in Segment (Kips)	Total Skin Friction (Kips)
0 20	0 0.45	0.225	20	42.4	42.4
20 35	0.40 0.67	[illegible]	15	78.6	115.0
35 56	0.85 1.30	1.075	21	212.8	332.[illegible]
56 79	1.10 1.65	1.375	23	298.1	6[illegible]
79 82	1.[illegible] 2.00	1.950	3	55.1	68[illegible]
82 107	2.00 2.00	2.00	25	471.3	1155.3
107 115	2.00 2.00	2.00	8	150.8	1,306.1
115 145	2.00 2.00	2.00	30	565.5	1,871.6
145 170	1.70 1.70	1.70	25	400.5	2,272.2
170 205	1.48 1.72	1.60	35	527.8	2,800.0
205 280	1.72 2.30	2.01	75	1,420.8	4,220.8
280 300	2.30 2.40	2.35	20	443.0	4,663.8
			$\Sigma = 300$ ft		

CREST OFFSHORE, INC.

By C. C. [illegible] Client U.S. NAVY Subject Structural Concept Analysis (3-4.2)
Date 3-21-76 Job No. 27-772-92 Calculation Pipe Pile Capacity Curves

Skin Friction Capacity ($Q_s = f_{as} A_s$)

--- Compression ---

O.D. = 39"

$A_s = \pi D (\Delta l) = 10.21 (\Delta l)$ SQ.FT

Penetration Below Mudline (ft)	Unit Skin Friction (KSF)	Avg. Unit Skin Friction f_{as} (KSF)	Segment Length (Δl) (FT)	Skin Friction in Segment (Kips)	Total Skin Friction (Kips)
0 20	0 0.45	0.225	20	45.9	0 45.9
20 35	0.40 0.67	0.535	15	81.9	127.8
35 56	0.85 1.30	1.075	21	230.5	358.3
56 79	1.10 1.65	1.375	23	322.9	681.2
79 82	1.90 2.00	1.950	3	59.7	740.9
82 107	2.00 2.00	2.00	25	510.5	1,251.4
107 115	2.00 2.00	2.00	8	163.4	1,414.8
115 145	2.00 2.00	2.00	30	612.6	2,027.4
145 170	1.70 1.70	1.70	25	433.9	2,461.3
170 205	1.48 1.72	1.60	35	571.8	3,033.1
205 280	1.72 2.30	2.01	75	1539.2	4,572.3
280 300	2.30 2.40	2.35	20	479.9	5,052.2
			$\Sigma = 300$ ft.		

Skin Friction Capacity ($Q_s = f_{as} A_s$)

--- Compression ---

$O.D. = 42"$

$A_s = \pi D(\Delta l) = 10.996(\Delta l)$ SQ.FT

Penetration Below Mudline (ft)	Unit Skin Friction (KSF)	Avg. Unit Skin Friction f_{as} (KSF)	Segment Length (Δl) (FT)	Skin Friction in Segment (Kips)	Total Skin Friction (Kips)
0 – 20	0 – 0.45	0.225	20	49.5	0 – 49.5
20 – 35	0.40 – 0.67	0.535	15	88.2	137.7
35 – 56	0.85 – 1.30	1.075	21	248.2	385.9
56 – 79	1.10 – 1.65	1.375	23	347.7	733.6
79 – 82	1.90 – 2.00	1.950	3	64.3	797.9
82 – 107	2.00 – 2.00	2.00	25	549.8	1,347.7
107 – 115	2.00 – 2.00	2.00	8	175.9	1,523.6
115 – 145	2.00 – 2.00	2.00	30	659.8	2,183.4
145 – 170	1.70 – 1.70	1.70	25	467.3	2,650.7
170 – 205	1.48 – 1.72	1.60	35	615.8	3,266.5
205 – 280	1.72 – 2.30	2.01	75	1,657.6	4,924.1
280 – 300	2.30 – 2.40	2.35	20	516.8	5,440.9
			$\Sigma = 300$ ft		

CREST OFFSHORE, INC.

By [illegible] Client [illegible] Subject Structural Concept [illegible]
Date [illegible] Job No. [illegible] Calculation [illegible] Pile Capacity [illegible]

[illegible] $(Q_p = q A_p)$

[illegible]	[illegible] q	[illegible] A_p [illegible]	[illegible] A_p [illegible]	[illegible] A_p [illegible]	[illegible] A_p [illegible]
0	0	0	0	0	0
20	[illegible]	44.[illegible]	63.6	74.7	86.6
30	[illegible]				
40	20	98.2	141.4	166.0	192.4
[illegible]	20				
[illegible]	35	171.9	247.[illegible]	290.5	336.7
[illegible]	18	88.4	127.3	149.4	173.2
79	18				
[illegible]	105	515.6	742.4	871.5	1,010.1
[illegible]	115	564.7	813.1	954.5	1,[illegible]
[illegible]	115				
107	200	982.0	1,414.0	1,660.0	1,926.0
107	200				
115	200				
115	200				
145	200				
145	100	491.0	707.0	830.0	962.0
170	100				
170	20	98.2	141.4	166.0	192.4
225	20				
[illegible]	20				
[illegible]	28	137.5	198.0	232.4	269.4
[illegible]	28				
300	[illegible]				

CRESTT OFFSHORE, INC.

Sheet [illegible] of [illegible]

By [illegible] Client [illegible] Subject Structural Concept Analysis ([illegible])
Date [illegible] Job No [illegible] Calculation Pipe Pile Capacity [illegible]

Ultimate Pile Capacity ($Q = Q_s + Q_p$) --- Compression

Penetration Below Mudline (ft)	[illegible] Q (kips)	36"ϕ Q (kips)	39"ϕ Q (kips)	42"ϕ Q (kips)
0	0	0	0	0
[illegible]	77.5	106.0	120.6	135.1
20				
35	196.7	259.4	293.8	330.1
[illegible]				
56	447.7	578.3	643.5	722.6
56	364.2	482.1	507.7	559.1
79	611.6	756.2	830.6	906.8
79	1,039.7	1,371.3	1,552.7	1,743.7
82	1,134.5	1,497.1	1,695.4	1,904.2
82				
107	[illegible]	2,569.3	2,911.4	3,271.7
107				
115	2,070.5	2,720.1	3,074.5	3,447.6
115				
148	2,541.7	[illegible]	3,687.4	4,107.4
148	2,050.7	2,576.6	2,857.4	3,145.4
170	[illegible]	[illegible]	3,291.3	3,612.7
170	1,941.7	2,413.6	2,627.0	2,842.7
[illegible]	2,431.5	[illegible]	3,199.1	3,459.5
[illegible]				
[illegible]	3,604.0	[illegible]	[illegible]	5,193.5
[illegible]				
[illegible]	4,023.9	4,361.8	5,284.4	5,710.3

By [illegible] Client U.S. NAVY Subject Structural Concept Engineering
Date 4/2/76 Job No [illegible] Calculation Pipe Pile Capacity Curves

Design Pile Capacity ($Q_a = Q / F.S.$) --- Compression

F.S. = 1.5

Penetration Below Mudline (ft)	30" Qa (kips)	36" Qa (kips)	39"φ Qa (kips)	42"φ Qa (kips)
0 20	0 55.0	0 70.7	0 80.4	0 90.7
20 35	131.1	172.9	195.9	220.1
35 56	298.5	385.5	432.5	48[illegible].7
56 79	242.8 408.4	305.4 504.1	338.5 553.7	372.7 604.5
79 82	693.1 7[illegible]	914.2 9[illegible].1	1,035.1 1,130.3	1,162.5 1,269.5
82 107	1,3[illegible]	1,712.9	1,940.9	2,181.1
107 115	1,380.3	1,813.4	2,049.9	2,298.4
115 145	1,694.5	2,190.4	2,452.3	2,738.3
145 170	1,367.1 1,539.7	1,719.1 1,986.1	1,904.9 2,194.2	2,095.9 2,403.5
170 200	1,327.8 1,621.0	1,601.1 1,962.9	1,751.5 2,132.7	1,895.1 2,305.7
200 260	2,[illegible]	2,945.9	3,203.1	3,462.3
260 320	2,692.6	3,241.2	3,522.9	3,8069

CREST OFFSHORE, INC.

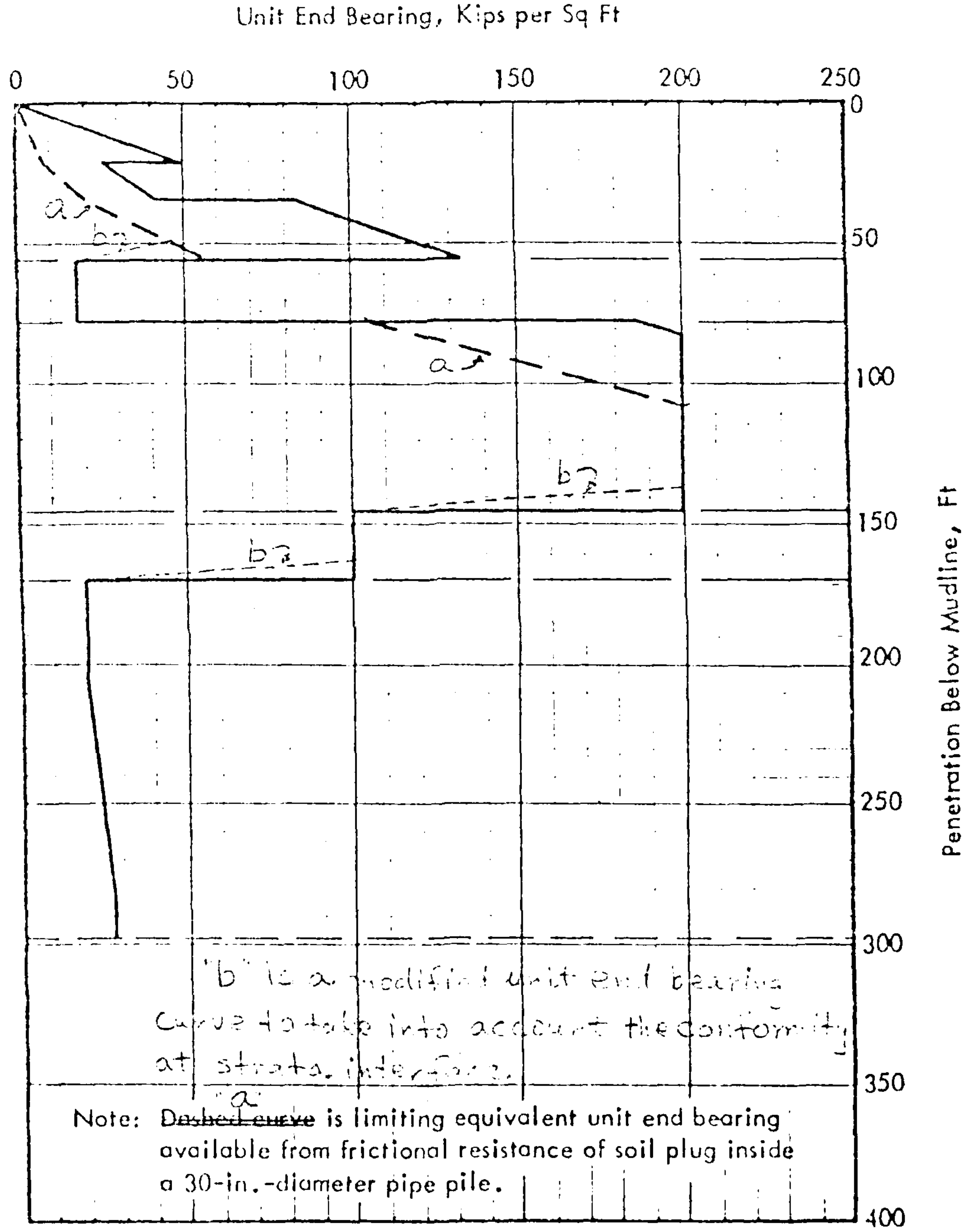
Sheet Z-21 of 41

By [illegible] Client U.S. NAVY Subject Structural Concept Analysis
Date [illegible] Job No. 32-7716 Calculation Pipe Pile Capacity Curves

Modification on Unit End Bearing Capacity

It is assumed that the unit end bearing capacity of the higher strength stratum reduces linearly at 3-D (pile outside diameter) distance above the strata intersurface to conform with that of the lower strength stratum.

for 30" O.D. pipe pile	3-D = 7.5 ft
36" O.D.	= 9.0
39" O.D.	= 9.75
42" O.D.	= 10.5



UNIT END BEARING

CRESTOFFSHORE, INC.

By ______ Client ______ Subject ______
Date ______ Job No ______ Calculation ______

30-in. Diameter Pipe Piles

(1) At Penetration 48.5 ft (= 56' - 7.5')

End Bearing $Q_p = (46\ ksf) \times (4.91') = 225.9$ kips

Skin Friction $Q_s = 98.5 + 1.075 \times (21-7.5) \times 7.854$

(see pg 2-14) $= 98.5 + 114.0$

$= 212.5$ kips

Ultimate capacity $Q = 225.9 + 212.5 = 438.4$ kips

Design Capacity $Q_d = 292.3$ kips

(2) At Penetration 137.5 ft (= 145' - 7.5')

End Bearing $Q_p = (200\ ksf) \times (4.915') = 982$ kips

Skin Friction $Q_s = 1088.5 + 2.0 \times (30-7.5) \times 7.854$
(see pg 2-14) $= 1088.5 + 353.4$

$= 1,441.9$ kips

Ultimate Capacity $Q = 1441.9 + 982 = 2,423.9$ kips

Design Capacity $Q_d = 1615.9$ kips

CREST OFFSHORE, INC.

Sheet [illegible] of [illegible]

By [illegible] Client U.S. NAVY Subject [illegible]

Date [illegible] Job No. [illegible] Calculation Pipe Pile Capacity Curves

[illegible] 170' [illegible]

End Bearing $Q_p = ([illegible]) \times ([illegible]) = 491$ kips

Skin Friction $Q_s = [illegible] + 170\,(23-7.5) \times 7.854$

(see p. 2-14)

$= 15[illegible].7 + [illegible]88.7$

$= 1{,}793.4$ kips

Ultimate Capacity $Q = 1{,}793.4 + [illegible]1.0$

$= 2{,}284.4$ kips

Design Capacity $Q_d = 1{,}552.9$ kips

36-in. Diameter Pipe Piles

(i) At Penetration 47.0 ft (=55'-9.0')

End Bearing $Q_p = (46\ ksf) \times (7.07\ sq\ ft) = 325.2\ kips$

Skin Friction (see p. 2.15) $Q_s = 118.0 + 1.075(21-9) \times 9.425$

$= 118.0 + 121.6$

$= 239.6$ kips

Ultimate Capacity $Q = 239.6 + 325.2 = 564.8$ kips

Design Capacity $Q_d = 376.5$ kips

(ii) At Penetration 136 ft (=145'-9')

End Bearing $Q_p = (200\ ksf) \times (7.07\ ft^2) = 1,414$ kips

Skin Friction (see p. 2.15) $Q_s = 1,306.1 + 2.0 \times (30-9) \times 9.425$

$= 1,306.1 + 395.9$

$= 1,672$ kips

Ultimate Capacity $Q = 1,672 + 1414 = 3,086.0$ kips

Design Capacity $Q_d = 2,057.3$ kips

(iii) At [illegible] 161.0 ft (+179'-9.0")

End Bearing $Q_p = (1[illegible]\ ksf)([illegible]\ sq\ ft) = 707$ kips

Skin Friction $Q_s = 1{,}8[illegible]7.6 + 1.70([illegible]-9)([illegible].425)$
(See pp. 2-15)

$= 1{,}8[illegible].6 + 256.4$

$= 2{,}123$ kips

Ultimate Capacity $Q_u = 2{,}123 + 707 = 2{,}835$ kips

Design Capacity $Q_d = 1390$ kips

39-in. Diameter Pipe Piles

(i) At Penetration 46.25' (=56'-9.75')

End Bearing $Q_p = (45\ ksf) \times (8.30\ ft^2) = 381.3$ kips

Skin Friction $Q_s = 127.3 + 1.075 \times (21 - 9.75) \times 10.21$
(see p. 2-16)

$= 127.3 + 123.[illegible]$

$= 251.8$ kips

Ultimate Capacity $Q = 251.8 + 381.3 = 633.1$ kips

Design Capacity $Q_d = 422.1$ kips

(ii) At Penetration 135.25 ft (=145'-9.75')

End Bearing $Q_p = 200 \times 8.30 = 1,660$ kips

Skin Friction $Q_s = 1414.8 + 2.0 \times (30 - 9.75) \times 10.21$
(see p. 2-16)

$= 1,414.8 + 413.5$

$= 1,828.3$ kips

Ultimate Capacity $Q = 1828.3 + 1,660 = 3,488.3$ kips

Design Capacity $Q_d = 2,325.5$ kips

CREST OFFSHORE, INC.

Sheet 2-23 of 4

By [illegible] Client U. S. N[illegible] Subject [illegible] Conceptual [illegible]

Date [illegible] Job No [illegible] Calculation Pile Capacity [illegible]

At Penetration [illegible] ft (=190'-9.75')

End Bearing $Q_p = 100 \times 8.30 = 830$ kips

Skin Friction (see p. 2-16) $Q_f = 2{,}027.4 + 1.70(2[illegible]-9.75) \times 10.21$

$= 2{,}027.4 + 264.7$

$= 2{,}292.1$ kips

Ultimate Capacity $Q = 2{,}292.1 + 830 = 3{,}122.1$ kips

Design Capacity $Q_d = 2{,}081.4$ kips

CREST OFFSHORE, INC.

By S. Chien Client U.S. NAVY Subject Structural Concept Analysis
Date 4-12-76 Job No [illegible] Calculation Pipe Pile Capacity

42-in Diameter Pipe Pile:

(i) At Penetration 45.5 ft (=56'-10.5')

End Bearing $Q_p = 46 \times 9.62 = 442.5$ kips

Skin Friction $Q_s = 137.7 + 1.070(21-10.5) \times 10.996$
(See pg. 2-17)

$= 137.7 + 124.1$

$= 261.8$ kips

Ultimate Capacity $Q = 261.8 + 442.5 = 704.3$ kips

Design Capacity $Q_d = 469.5$ kips

(ii) At Penetration 134.5 ft (=145'-10.5')

End Bearing $Q_p = 200 \times 9.62 = 1,924$ kips

Skin Friction $Q_s = 1,528.6 + 2.0 \times (30-10.5) \times 10.996$
(See Pg. 2-17)

$= 1,528.6 + 423.8$

$= 1,952.4$ kips

Ultimate Capacity $Q = 1,952.4 + 1,924 = 3,876.4$ kips

Design Capacity $Q_d = 2,584.3$ kips

(iii) At Penetration 139.5 ft (=150' - 10.5')

End Bearing $Q_p = 100 \times 9.62 = 962$ kips

Skin Friction $Q_s = 2,183.4 + 1.70 \times (25 - 10.5) \times 10.996$
(See p. 2-17)

$= 2,183.4 + 271.1$

$= 2,454.5$ kips

Ultimate Capacity $Q = 2,454.5 + 962 = 3,416.5$ kips

Design Capacity $Q_d = 2,277.7$ kips

2.4 PILE CAPACITY IN TENSION

$$Q = Q_s$$

where Q_s = skin friction on the wall of the pile

By [illegible] Client [illegible] Subject [illegible]
Date [illegible] Job No. [illegible] Calculation [illegible]

Skin Friction Capacity ($Q_s = f_{as} A_s$)

--- Tension ---

$O.D. = 30''$

$A_s = \pi D(\Delta l) = 7.854(\Delta l)$ SQ.FT

Penetration Below Mudline (ft)	Unit Skin Friction (KSF)	Ave. Unit Skin Friction f_{as} (KSF)	Segment Length (Δl) (FT)	Skin Friction in Segment (KIPS)	Total Skin Friction (KIPS)
0 20	0 0.33	0.165	20	25.9	0 25.9
20 35	0.29 0.46	0.375	15	44.2	70.1
35 56	0.60 0.95	0.775	21	127.8	197.9
56 79	0.80 1.10	0.950	23	171.6	369.5
79 82	1.35 1.43	1.390	3	32.8	402.3
82 107	1.43 2.00	1.715	25	336.7	739.0
107 115	2.00 2.00	2.00	8	125.7	864.7
115 145	2.00 2.00	2.00	30	471.2	1,335.9
145 170	1.70 1.70	1.70	25	333.8	1,669.7
170 205	1.48 1.72	1.60	35	439.8	2,109.5
205 280	1.72 2.30	2.01	75	1,184.0	3,293.5
280 300	2.30 2.40	2.35	20	369.1	3,662.6
			$\Sigma = 300$ ft		

CREST OFFSHORE, INC.

Sheet 23 of 41

By [illegible] Client [illegible] Subject [illegible]
Date [illegible] Job No [illegible] Calculation [illegible]

Skin Friction Capacity ($Q_s = f_{as} A_s$)

--- Tension --- O.D. = 36"

$A_s = \pi D (\Delta l) = 9.425 (\Delta l)$ SQ.FT

Penetration Below Mudline (ft)	Unit Skin Friction (ksf)	Avg. Unit Skin Friction f_{as} (ksf)	Segment Length (Δl) (FT)	Skin Friction in Segment (kips)	Total Skin Friction (kips)
0 20	0 0.33	0.165	20	31.1	0 31.1
20 35	0.29 0.46	0.375	15	53.0	84.1
35 56	0.60 0.95	0.775	21	153.4	237.5
56 79	0.80 1.10	0.950	23	205.9	443.4
79 82	1.35 1.43	1.390	3	39.3	482.7
82 107	1.43 2.00	1.715	25	404.1	886.8
107 115	2.00 2.00	2.00	8	150.8	1,037.6
115 145	2.00 2.00	2.00	30	565.5	1,603.1
145 170	1.70 1.70	1.70	25	400.6	2,003.7
170 205	1.48 1.72	1.60	35	527.8	2,531.5
205 280	1.72 2.30	2.01	75	1,420.8	3,952.3
280 300	2.20 2.50	2.35	20	443.0	4,395.3
			Σ = 300 ft		

CREST OFFSHORE, INC.

Sheet [illegible] of [illegible]

By [illegible] Client [illegible] Subject [illegible]
Date [illegible] Job No [illegible] Calculation [illegible]

Skin Friction Capacity ($Q_s = f_{as} A_s$)

--- Tension ---

$O.D. = 39''$

$A_s = \pi D(\Delta l) = 10.21(\Delta l)$ SQ.FT

Penetration Below Mudline (ft)	Unit Skin Friction (ksf)	Ave. Unit Skin Friction f_{as} (ksf)	Segment Length (Δl) (FT)	Skin Friction in Segment (Kips)	Total Skin Friction (Kips)
0 20	0 0.33	0.165	20	33.7	0 33.7
20 35	0.29 0.46	0.375	15	57.4	91.1
35 56	0.60 0.95	0.775	21	166.2	257.3
56 79	0.80 1.10	0.950	23	223.1	480.4
79 82	1.35 1.43	1.390	3	42.6	523.0
82 107	1.43 2.00	1.715	25	437.8	960.8
107 115	2.00 2.00	2.00	8	163.4	1,124.2
115 145	2.00 2.00	2.00	30	612.6	1,736.8
145 170	1.70 1.70	1.70	25	433.9	2,170.7
170 205	1.48 1.72	1.60	35	571.8	2,742.5
205 280	1.72 2.30	2.01	75	1,539.2	4,281.7
280 300	2.30 2.40	2.35	20	479.9	4,761.6
			$\Sigma = 300^{ft}$		

CREST OFFSHORE, INC.

Sheet [illegible] of [illegible]

By [illegible] Client [illegible] Subject [illegible]
Date [illegible] Job No. [illegible] Calculation [illegible]

Skin Friction Capacity ($Q_s = f_{as} A_s$)

--- Tension --- O.D. = 42"

$A_s = \pi D (\Delta l) = 10.996 (\Delta l)$ SQ.FT

Penetration Below Mudline (ft)	Unit Skin Friction (KSF)	Ave. Unit Skin Friction f_{as} (KSF)	Segment Length (Δl) (FT)	Skin Friction in Segment (Kips)	Total Skin Friction (kips)
0 20	0 0.33	0.165	20	36.3	0 36.3
20 35	0.29 0.46	0.375	15	61.9	98.2
35 56	0.60 0.95	0.775	21	179.0	277.2
56 79	0.80 1.10	0.950	23	240.3	517.5
79 82	1.35 1.43	1.390	3	45.9	563.4
82 107	1.43 2.00	1.715	25	471.5	1,034.9
107 115	2.00 2.00	2.00	8	175.9	1,210.8
115 145	2.00 2.00	2.00	30	659.8	1,870.6
145 170	1.70 1.70	1.70	25	467.3	2,337.9
170 205	1.48 1.72	1.60	35	615.3	2,953.7
205 280	1.72 2.30	2.01	75	1,657.6	4,611.3
280 300	2.30 2.40	2.35	20	516.8	5,128.1
			$\Sigma = 300^{ft}$		

CREST OFFSHORE, INC.

Sheet [illegible] of [illegible]

By [illegible] Client [illegible] Subject [illegible] Concept [illegible]
Date [illegible] Job No [illegible] Calculation Pipe Pile Capacity [illegible]

Ultimate Pile [illegible] (Q - Q[illegible]) --- Tension

Penetration Below M.L. (Ft)	30" ⌀ Q (KIPS)	36" ⌀ Q (KIPS)	39" ⌀ Q (KIPS)	42" ⌀ Q (KIPS)
0	0	0	0	0
20	25.9	31.1	33.7	36.3
20 – 35	70.1	84.1	91.1	98.2
35 – 56	197.9	237.5	257.3	277.2
56 – 79	369.5	443.4	480.4	517.5
79 – 82	402.3	482.7	523.0	563.4
82 – 107	739.0	886.8	960.8	1,034.[illegible]
107 – 115	864.7	1,037.6	1,124.2	1,210.8
115 – 145	1,336.9	1,603.1	1,736.8	1,870.6
145 – 170	1,669.7	2,003.7	2,170.7	2,337.9
170 – 205	2,109.5	2,531.5	2,742.5	2,9[illegible].7
205 – 250	3,293.5	3,[illegible]	4,281.7	4,611.3
250 – 300	3,663.6	4,396.3	4,761.6	5,128.1

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Sheet [illegible] of 41

By [illegible] Client U.S. Navy Subject Structural Concept [illegible]
Date [illegible] Job No. [illegible] Calculation Pipe Pile Capacity Curves

Design Pile Capacity ($Q_d = Q/F.S.$) --- Tension

F.S. = 1.5

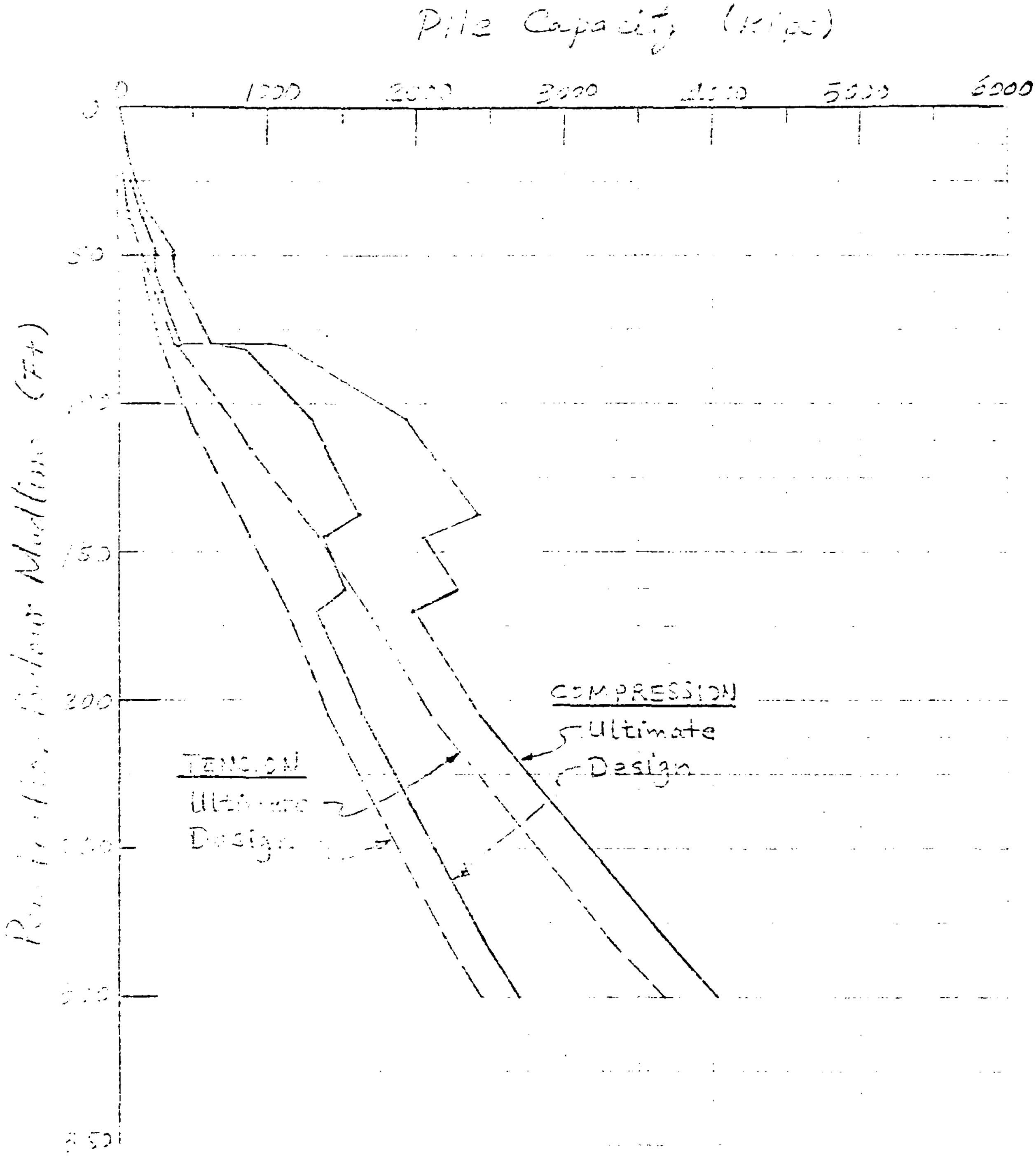
Penetration Below Mudline (Ft)	30"φ Q_d (kips)	36"φ Q_d (kips)	39"φ Q_d (kips)	42"φ Q_d (kips)
0	0	0	0	0
20	17.5	20.7	22.5	24.2
20 – 35	46.7	56.1	60.7	65.5
35 – 56	131.9	158.3	171.5	184.8
56 – 79	246.5	29[illegible]	320.5	345.0
79 – 82	268.2	321.8	348.7	375.6
82 – 107	4[illegible].7	591.2	640.5	689.9
107 – 115	576.5	691.7	743.5	807.2
115 – 145	8[illegible]0.6	1,068.7	1,157.9	1,247.1
145 – 170	1,113.1	1,335.8	1,447.1	1,558.6
170 – 205	1,406.5	1,6[illegible]7.7	1,823.3	1,969.1
205 – 280	2,195.7	2,6[illegible]4.9	2,8[illegible]4.5	3,074.2
280 – 300	2,441.7	2,930.2	3,174.4	3,418.7

CREST OFFSHORE, INC.

Sheet ___ of ___

By ___ Client U.S. NAVY ___ Subject Structural Concept ___

Date ___ Job No. ___ 92 Calculation Pipe Pile Capacity Curves



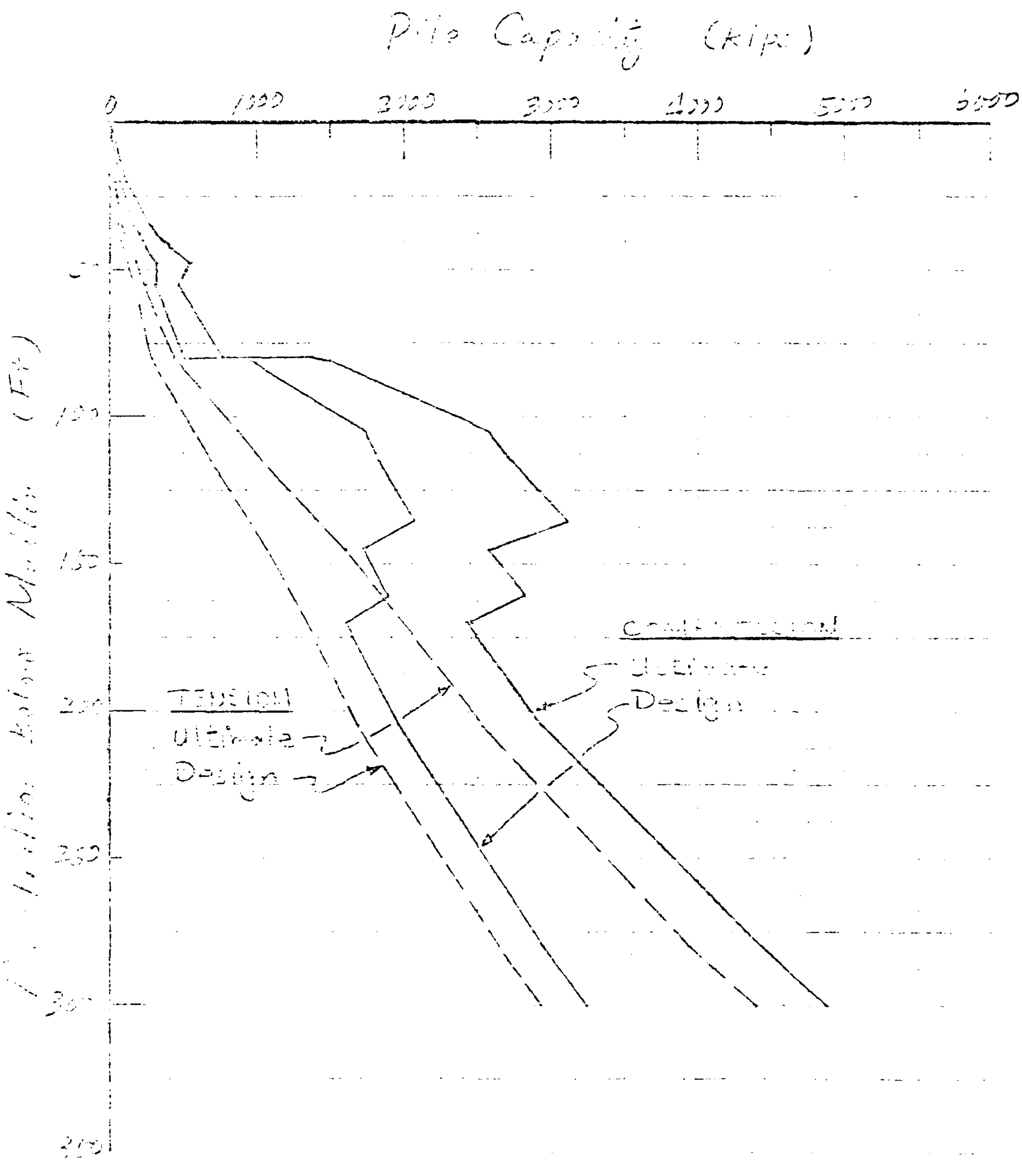
-in. Diameter Pipe Piles

CREST OFFSHORE, INC.

Sheet:

By: Client: U.S. NAVY Subject: Structural Concept

Date: Job No.: Calculation: Pile Capacity



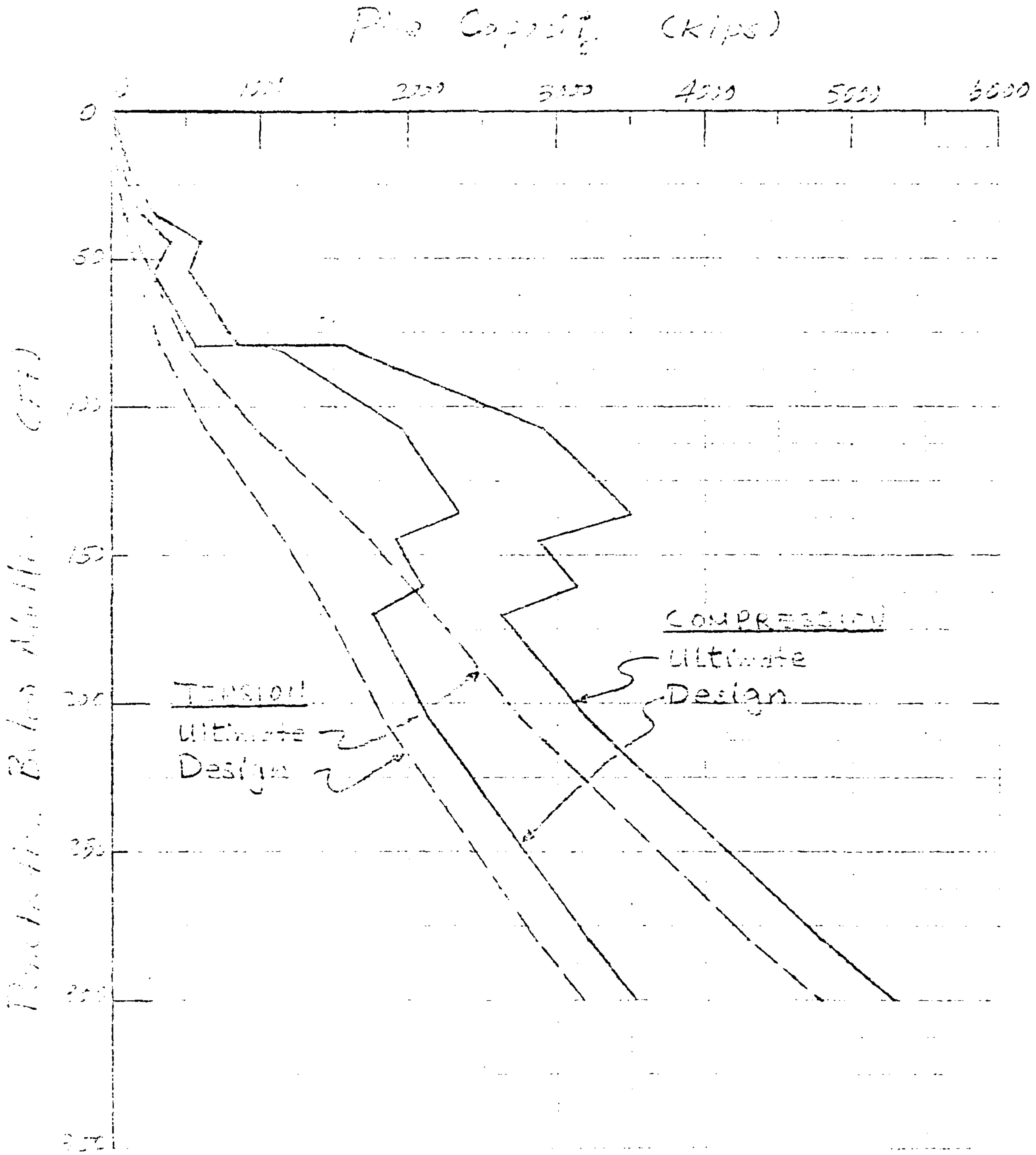
36-in. Diameter Pipe Pile

CREST OFFSHORE, INC.

Sheet [illegible] of 41

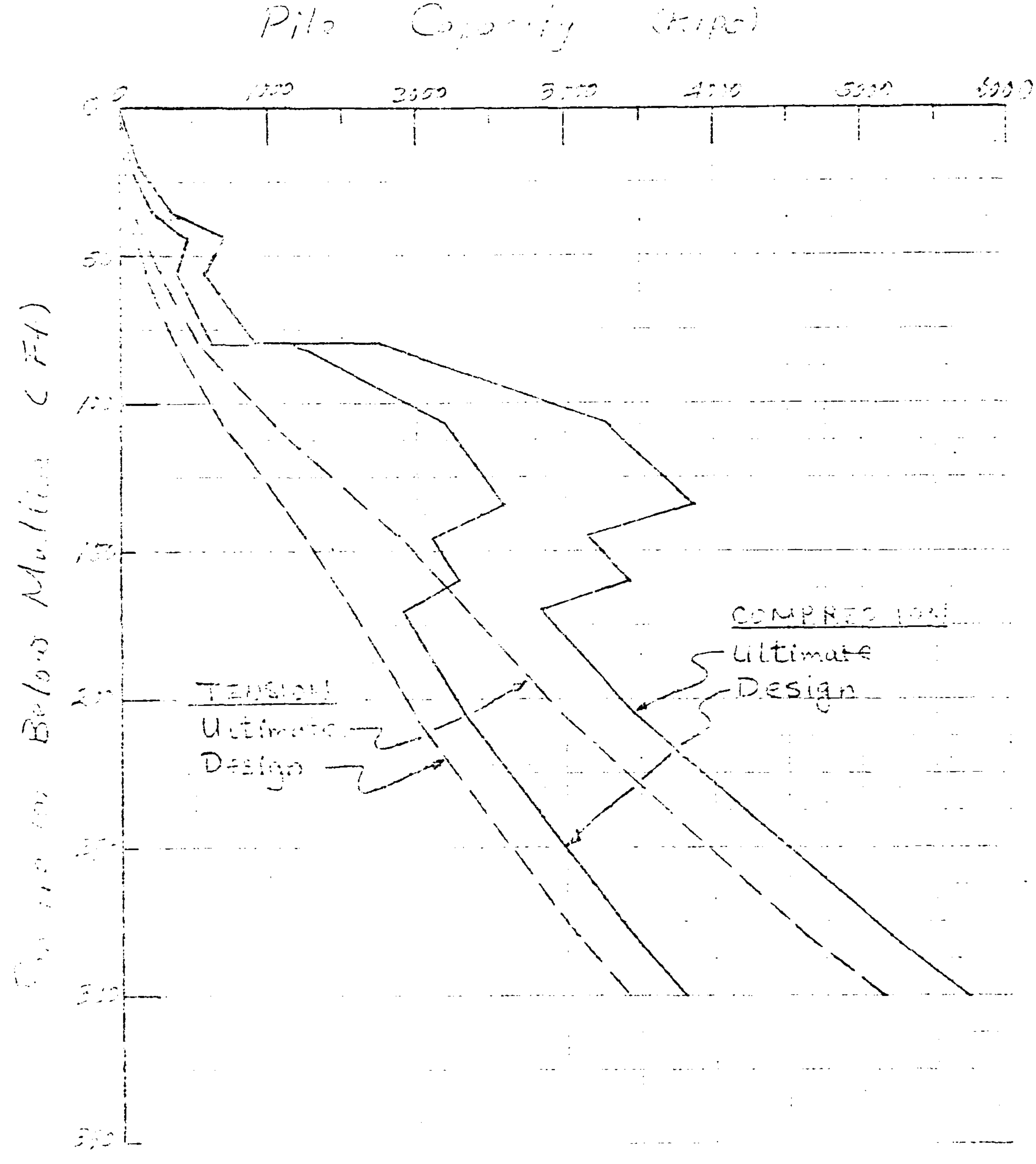
By [illegible] Client U.S. Navy Subject [illegible]

Date [illegible] Job No. [illegible] Calculation [illegible]



39-in. Diameter Pipe Piles

CREST OFFSHORE, INC.



42-in Diameter Pipe Piles

SECTION 3

PILE DRIVING RESISTANCE CURVES

3.1 INTRODUCTION

Driving resistance curves are developed using the stress wave approach as presented in the McClelland Report. It should be noted that these curves are empirical and approximate and in no way assume attainment of the desired penetration.

3-2 30-IN. DIAMETER PIPE PILES

Estimated Driving Resistance

= 50% Skin Friction in Clay

100% Skin Friction in Sand

No End Bearing

CREST OFFSHORE, INC.

Sheet 3.93 of 25

By C. Chen Client U.S. NAVY Subject Structural Concept Analysis
Date 4-14-76 Job No. 27-776-92 Calculation Pile Driving Resistance Curves

Skin Friction Capacity ($Q_s = f_{as} A_s$)

--- Compression ---

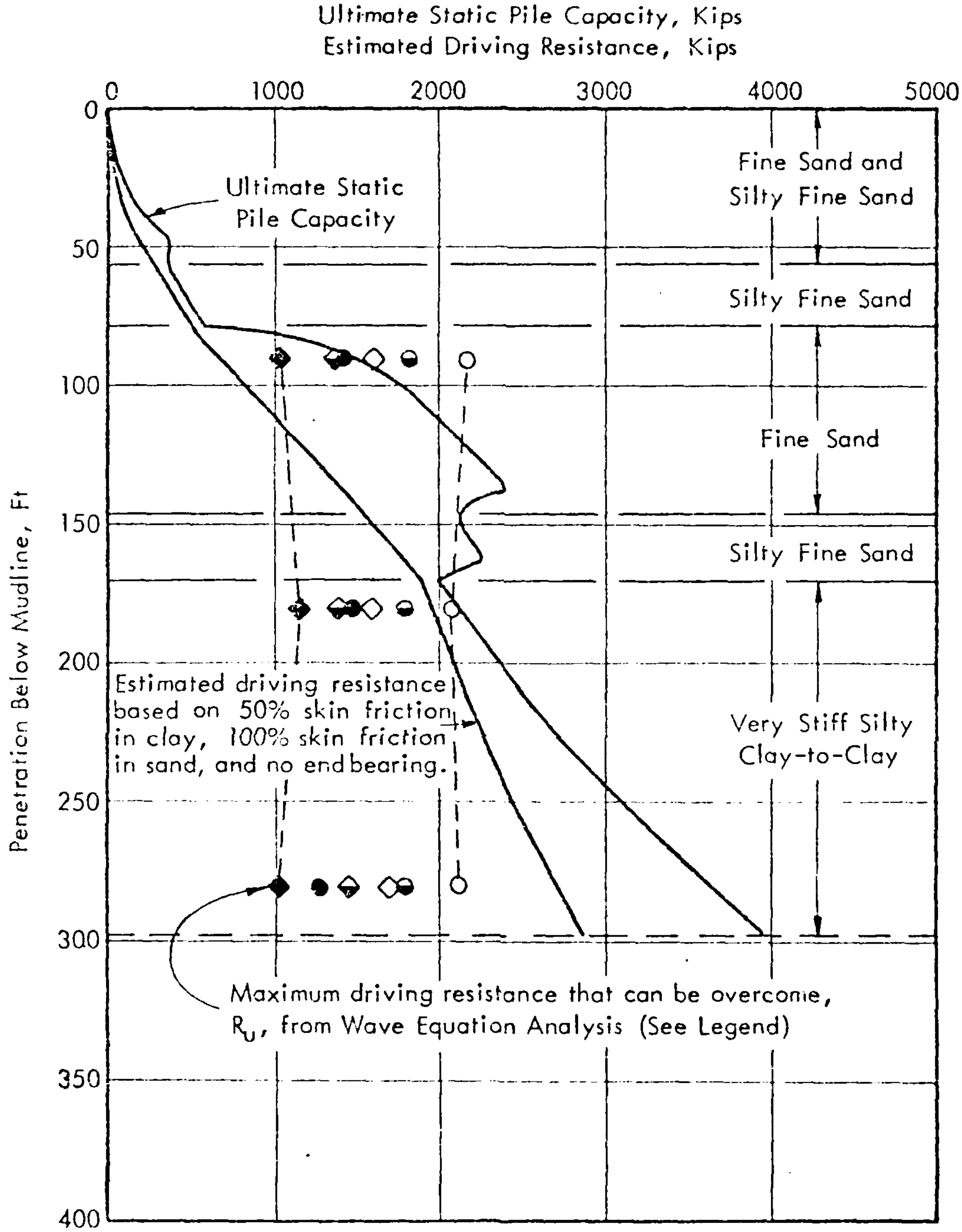
$O.D. = 30''$

$A_s = \pi D(\Delta l) = 7.854(\Delta l)$ sq.ft

Penetration Below Mudline (ft)	Unit Skin Friction (ksf)	Ave. Unit Skin Friction f_s (ksf)	Segment Length (Δl) (FT)	Skin Friction in Segment (Kips)	Total Skin Friction (Kips)
0 20	0 0.45	0.225	20	35.3	0 35.3
20 35	0.40 0.67	0.535	15	63.0	98.3
35 56	0.85 1.30	1.075	21	177.3	275.8
56 79	1.10 1.65	1.375	23	248.4	524.2
79 82	1.90 2.00	1.950	3	45.9	570.1
82 107	2.00 2.00	2.00	25	392.7	962.8
107 115	2.00 2.00	2.00	8	125.7	1,088.5
115 145	2.00 2.00	2.00	30	471.2	1,559.7
145 170	1.70 1.70	1.70	25	333.8	1,893.5
170 205	1.48 1.72	1.60	35	219.9 * ~~[illegible]~~	2113.4 ~~[illegible]~~
205 280	1.72 2.30	2.01	75	592.0 * ~~[illegible]~~	2,705.4 ~~[illegible]~~
280 300	2.30 2.40	2.35	20	184.5 * ~~[illegible]~~	2,889.9 ~~[illegible]~~
			$\Sigma = 300^{ft}$		

* 50% SKIN FRICTION IN CLAY

By [illegible] Client U.S. NAVY Subject Structural Concept [illegible]
Date 4-1-76 Job No. 27-171-92 Calculation Pile Driving Resistance Curves



Boring 1

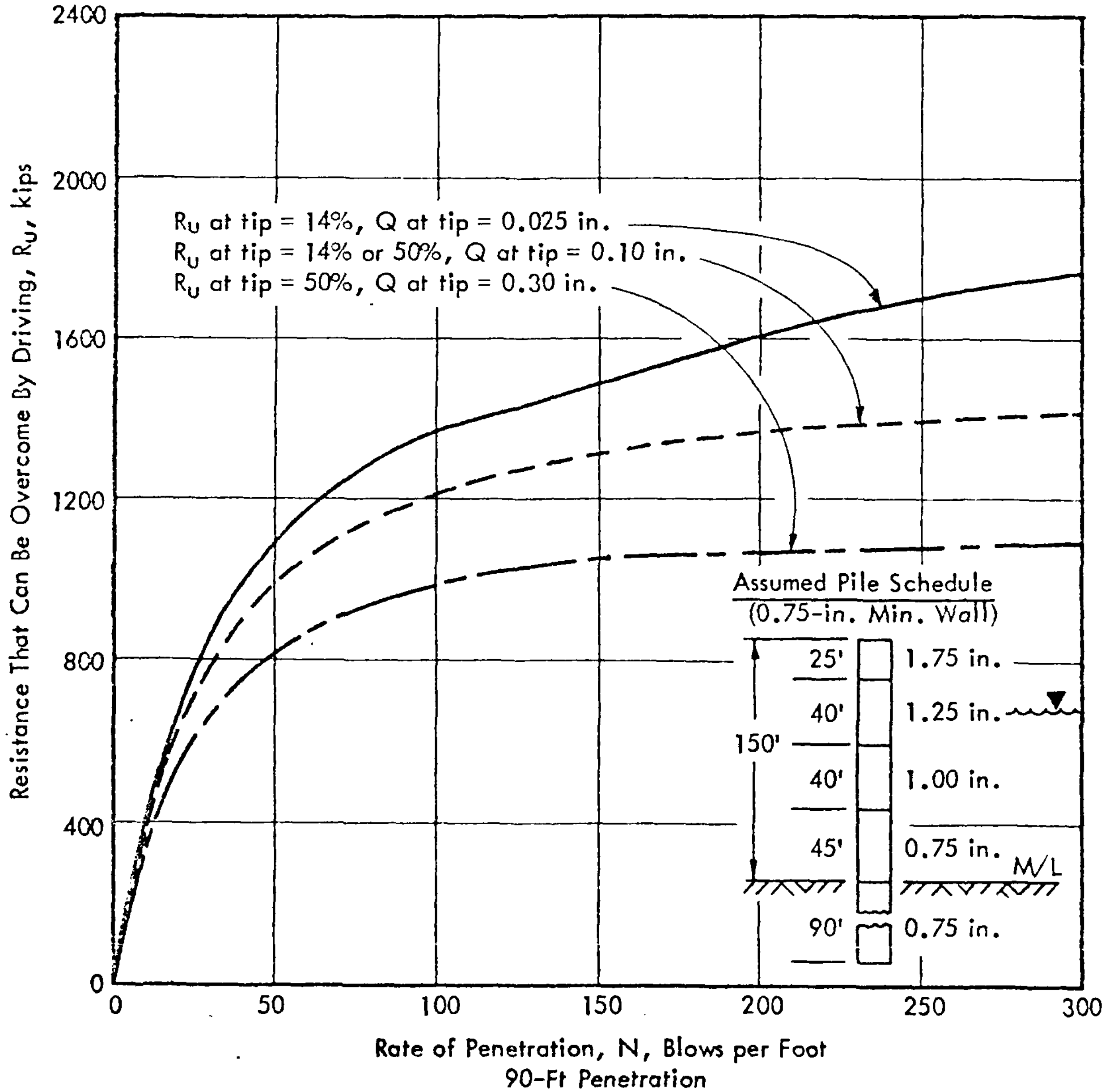
LEGEND					
Symbol		R_u at tip, %, for pile penetration of			Q at tip, inches
0.75-in. Min. Wall	1.25-in. Min. Wall	90'	180'	280'	
◆	●	50	50	2	0.3
⬙	◓	50 or 14	35 or 6	2	0.1
◇	○	14	14	2	0.025

CREST OFFSHORE, INC.

Sheet 3.25 of [illegible]

By C. Chern Client U.S. NAVY Subject Structural Concept Analysis [illegible]

Date 4-14-76 Job No. 37-271-92 Calculation Pile Driving Resistance Curves



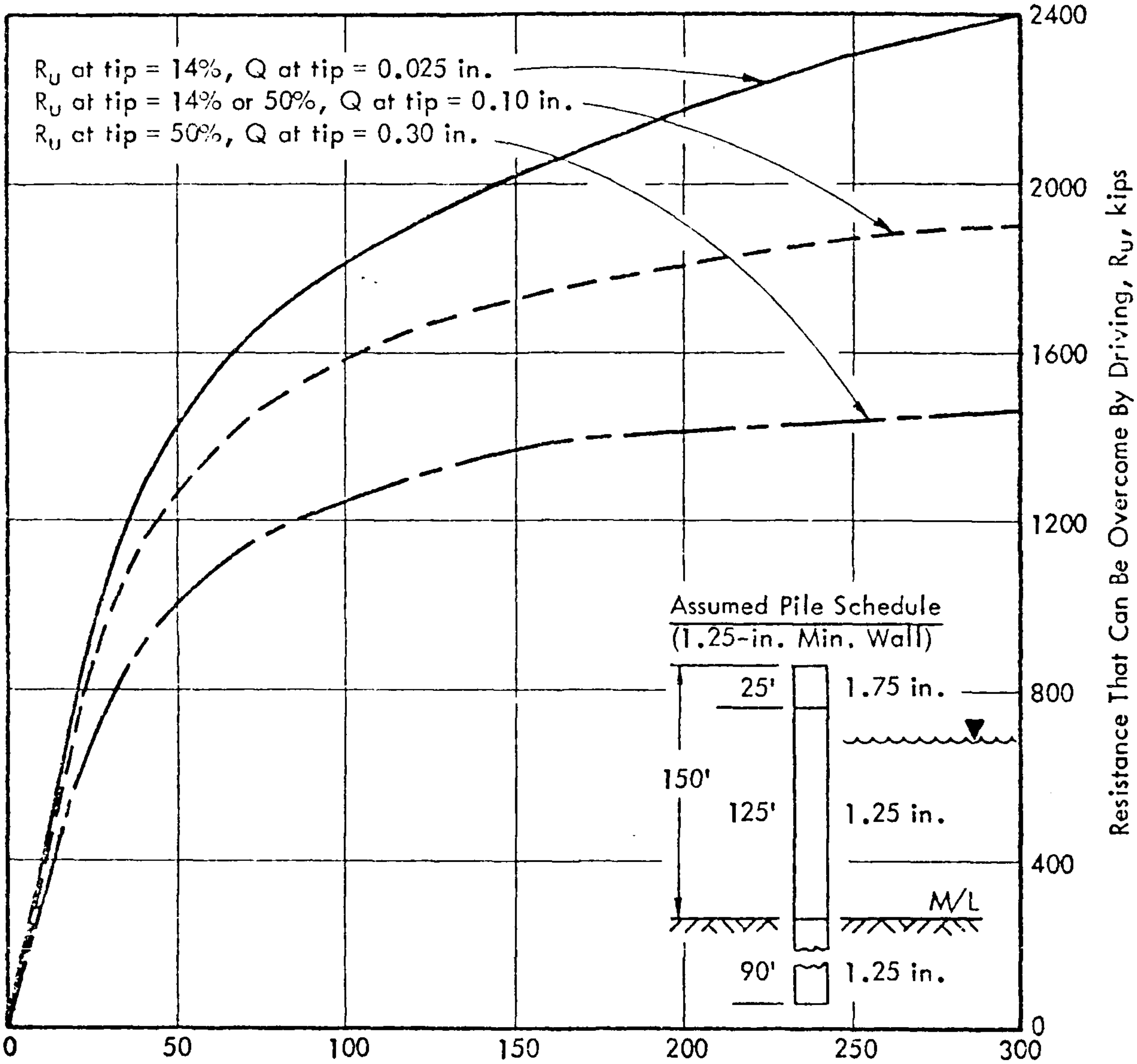
Vulcan 040 Hammer	% R_U at tip - See Above
Wt. of Ram = 40,000 lbs	Spring Constant = 2.78×10^6 lbs/in.
Rated Energy = 120,000 ft-lbs	Damping Factor, side & tip, J = 0.15
Hammer Efficiency = 0.75	Quake Factor, side, Q = 0.10 in.
Wt. of Pile Cap = 27,800 lbs	Quake Factor, tip, - See Above

CREST OFFSHORE, INC.

Sheet 3.06 of 29

By C. Chern Client U.S. NAVY Subject Structural Concept Analysis-pile

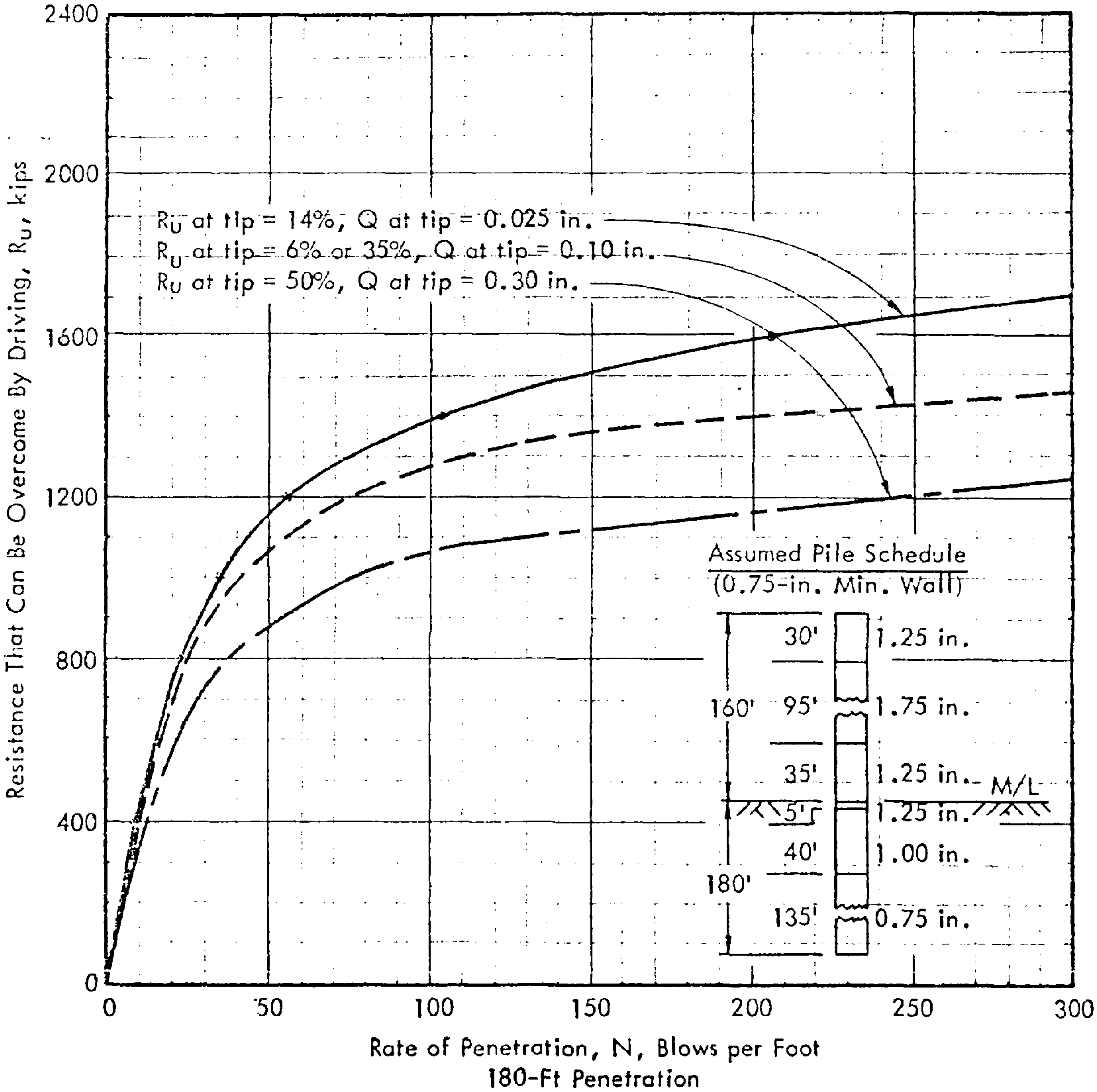
Date 4-15-76 Job No. 27-771-92 Calculation Pile Driving Resistance Curves



CREST OFFSHORE, INC.

Sheet 3-27 of 23

By S. Chern Client U.S. NAVY Subject Structural Concept Analysis
Date 11-76 Job No. 27-271-2 Calculation Pile Driving Resistance Curves



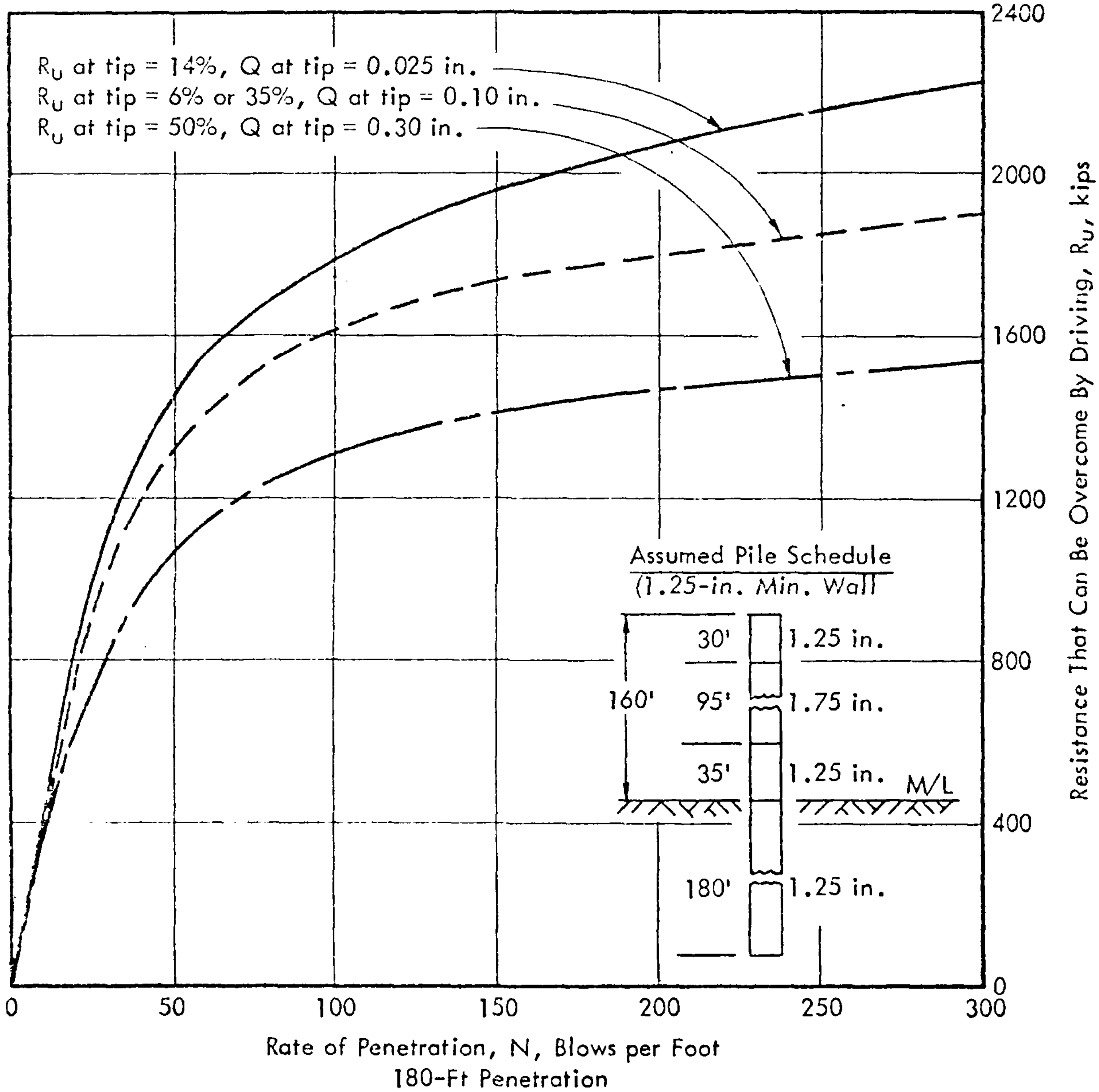
Vulcan 040 Hammer	% R_u at tip - See Above
Wt. of Ram = 40,000 lbs	Spring Constant = 2.78 x 10^6 lbs/in.
Rated Energy = 120,000 ft-lbs	Damping Factor, side & tip, J = 0.15
Hammer Efficiency = 0.75	Quake Factor, side, Q = 0.10 in.
Wt. of Pile Cap = 27,800 lbs	Quake Factor, tip, - See Above

CREST OFFSHORE, INC.

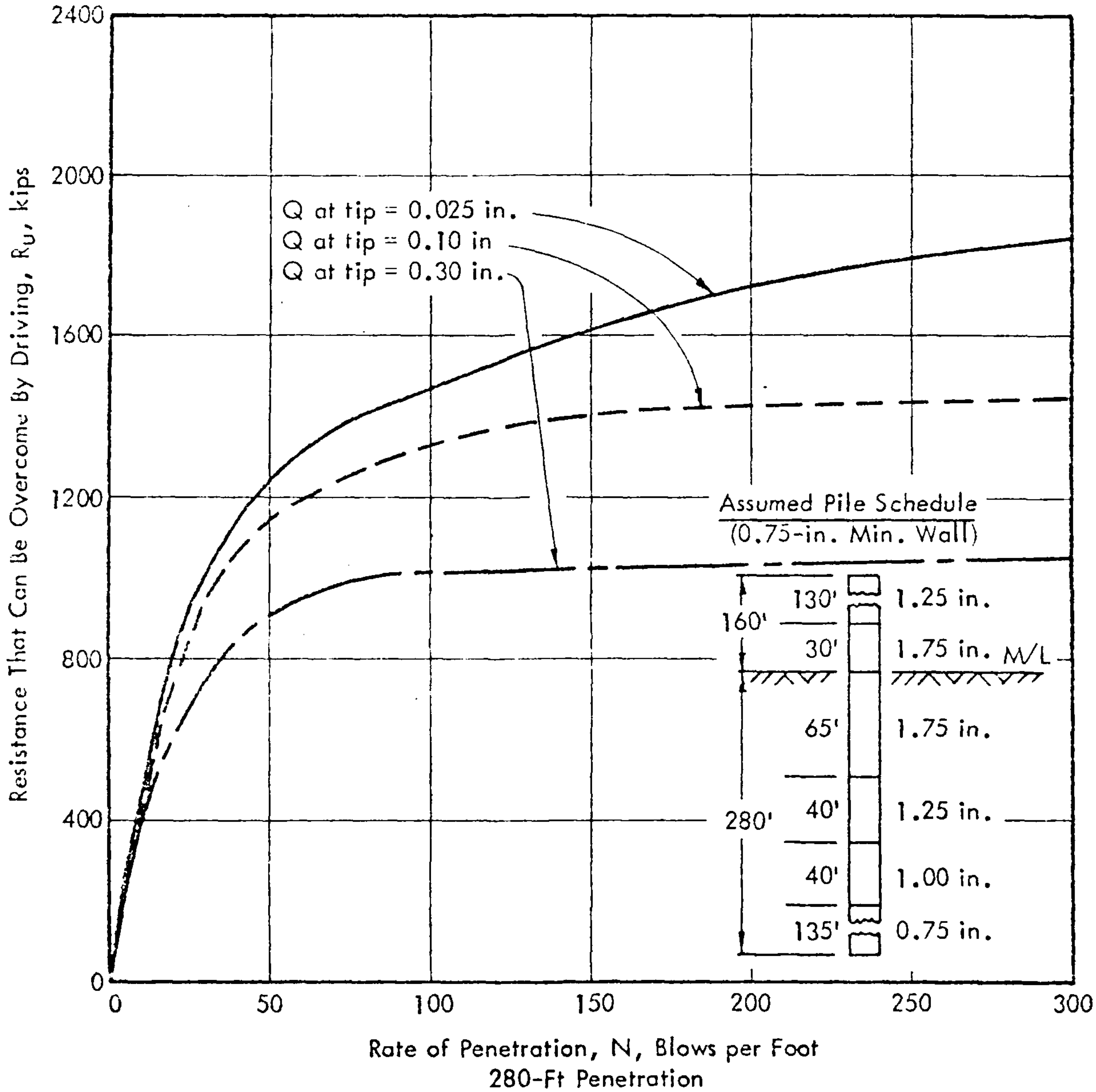
Sheet 3.23 of 22

By C. Chen Client U.S. NAVY Subject Structural Concept Analysis (3-pi

Date 4-14-76 Job No. 27-771-93 Calculation Pile Driving Resistance Cu



By C. Chern Client U.S. NAVY Subject Structural Concept Analysis
Date 4-14-76 Job No. 22-771-92 Calculation Pile Driving Resistance Curve

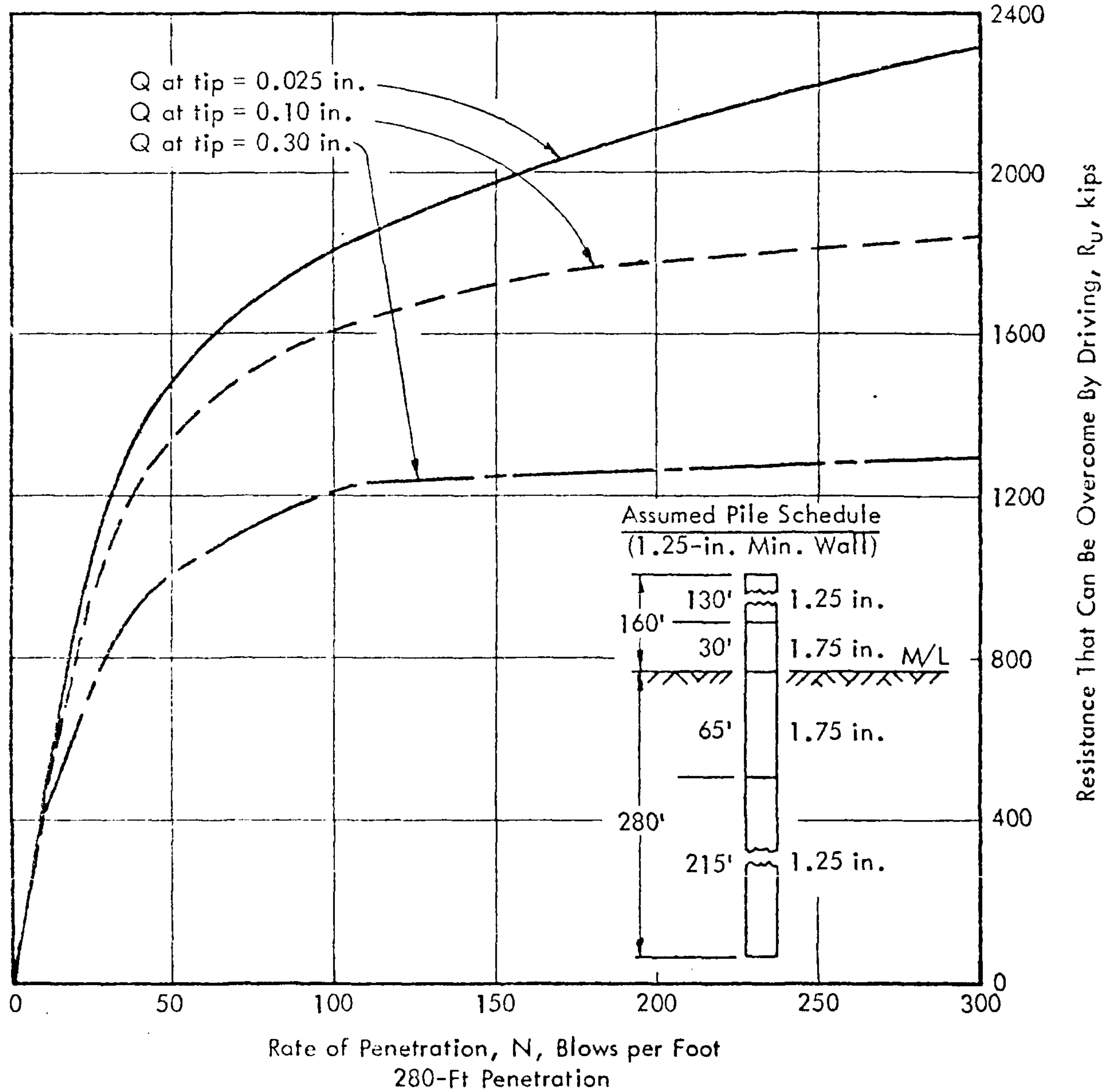


Vulcan 040 Hammer	% R_u at tip = 2%
Wt. of Ram = 40,000 lbs	Spring Constant = 2.78×10^6 lbs/in.
Rated Energy = 120,000 ft-lbs	Damping Factor, side & tip, J = 0.15
Hammer Efficiency = 0.75	Quake Factor, side, Q = 0.10 in.
Wt. of Pile Cap = 27,800 lbs	Quake Factor, tip, - See Above

CREST OFFSHORE, INC.

Sheet 3-10 of 25

By C. Chen Client U.S. NAVY Subject Structural Concept Analysis
Date 4-14-76 Job No. 27-77-22 Calculation Pile Driving Resistance Curve



3.3 36-IN. DIAMETER PIPE PILES

The data and the "STRESS WAVE ANALYSIS PROGRAM" printouts used to plot the piledriving resistance curves setforth in this section were compiled in APPENDIX A.2

CREST OFFSHORE, INC.

Sheet 3-12 of [illegible]

By C. Chen Client U.S. NAVY Subject Structural Concept Analysis (Cont'd)
Date 4-14-76 Job No. 27-771-72 Calculation Pile Driving Resistance Curves

Skin Friction Capacity ($Q_s = f_{as} A_s$)

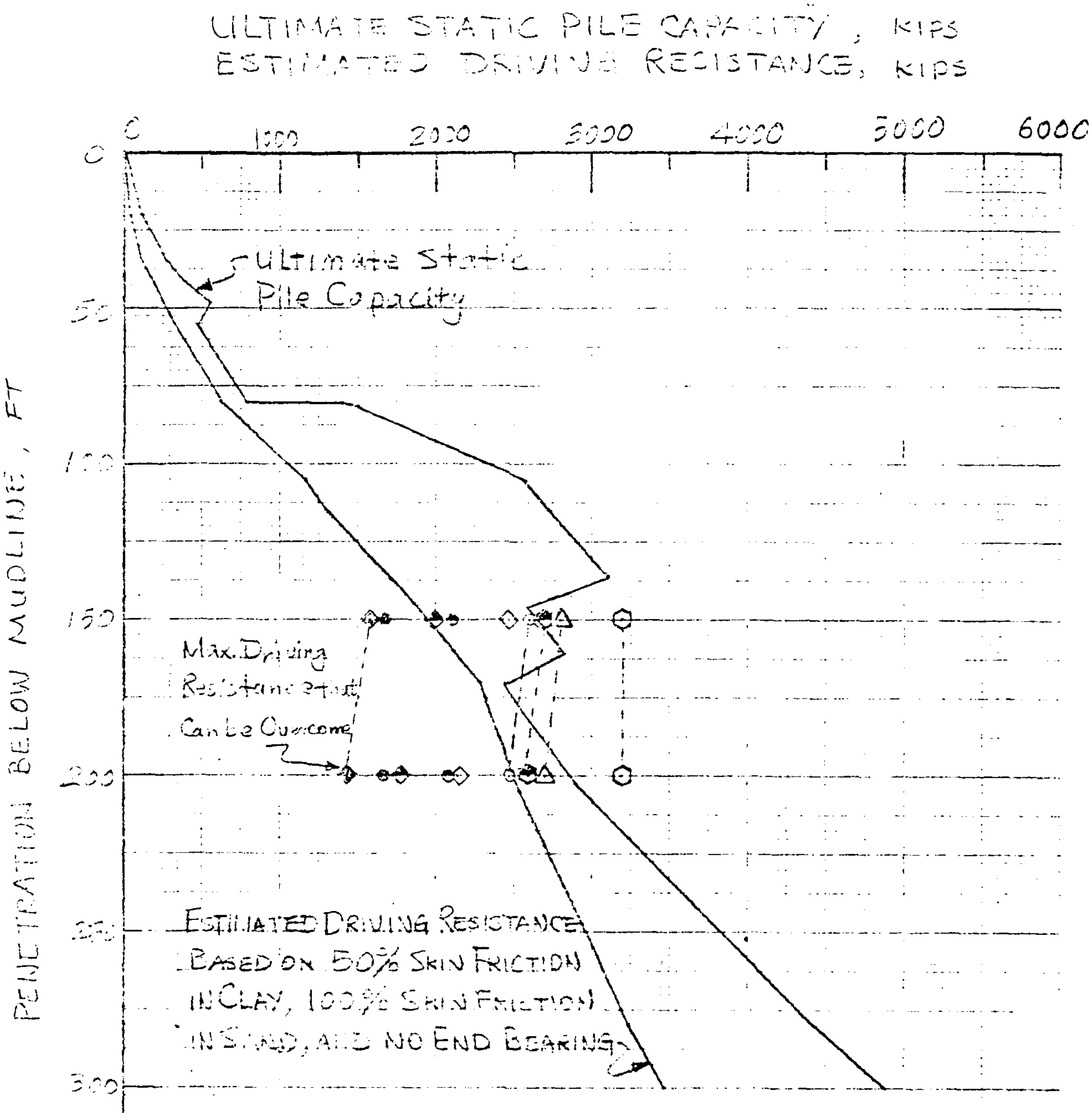
--- Compression ---

$O.D. = 36''$

$A_s = \pi D (\Delta l) = 9.425(\Delta l)$ SQ.FT

Penetration Below Mudline (ft)	Unit Skin Friction (ksf)	Ave. Unit Skin Friction f_{as} (ksf)	Segment Length (Δl) (FT)	Skin Friction in Segment (kips)	Total Skin Friction (kips)
0 – 20	0 – 0.45	0.225	20	42.4	0 – 42.4
20 – 35	0.40 – 0.67	0.535	15	75.6	118.0
35 – 56	0.85 – 1.30	1.075	21	212.8	330.8
56 – 79	1.10 – 1.65	1.375	23	298.1	628.9
79 – 82	1.90 – 2.00	1.950	3	55.1	684.0
82 – 107	2.00 – 2.00	2.00	25	471.3	1,155.3
107 – 115	2.00 – 2.00	2.00	8	150.8	1,306.1
115 – 145	2.00 – 2.00	2.00	30	565.5	1,871.6
145 – 170	1.70 – 1.70	1.70	25	400.6	2,272.2
170 – 205	1.48 – 1.72	1.60	35	263.9* ~~527.8~~	2,536.1
205 – 280	1.72 – 2.30	2.01	75	710.4*	3,246.5
280 – 300	2.30 – 2.40	2.35	20	221.5* ~~443.0~~	3,468.0
			$\Sigma = 300$ ft		

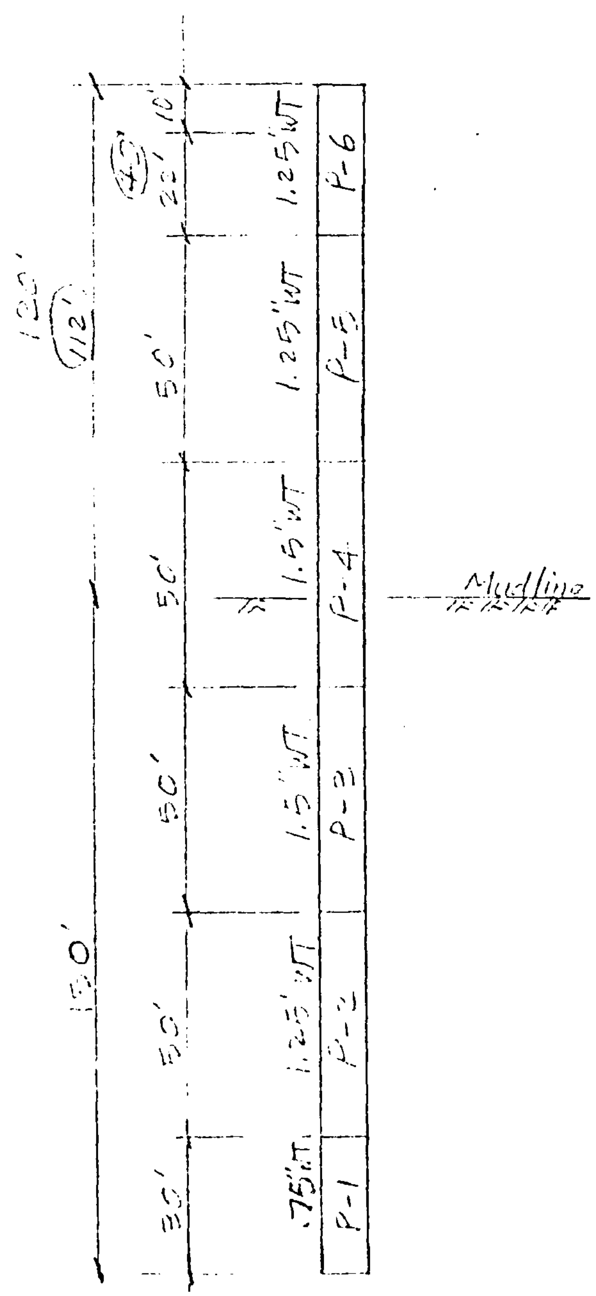
*50 % SKIN FRICTION IN CLAY



Symbol			Ru at Pile Tip, % Penetration		Q at Pile Tip, in.	Hammer
.75" WT Min.	1.25" WT Min.	1.5" WT Min.	150'	200'		
◈	◑		50	50	.3	Vulcan
◈	◒		35	35	.1	040
◇	○	△	14	14	.025	
		⬢	35	35	.1	Vulcan
		⬡	14	14	.025	060

36-IN. DIAMETER PIPE PILES

Assumed Pile Schedule -- 150 FT PENETRATION
.75" WALL THK. MIN.



Vulcan 040 Hammer
Wt. of Ram = 40,000 lbs
Rated Energy = 120,000 ft-lbs
Hammer Efficiency = 0.75
Wt. of Pile Cap = 27,800 lbs

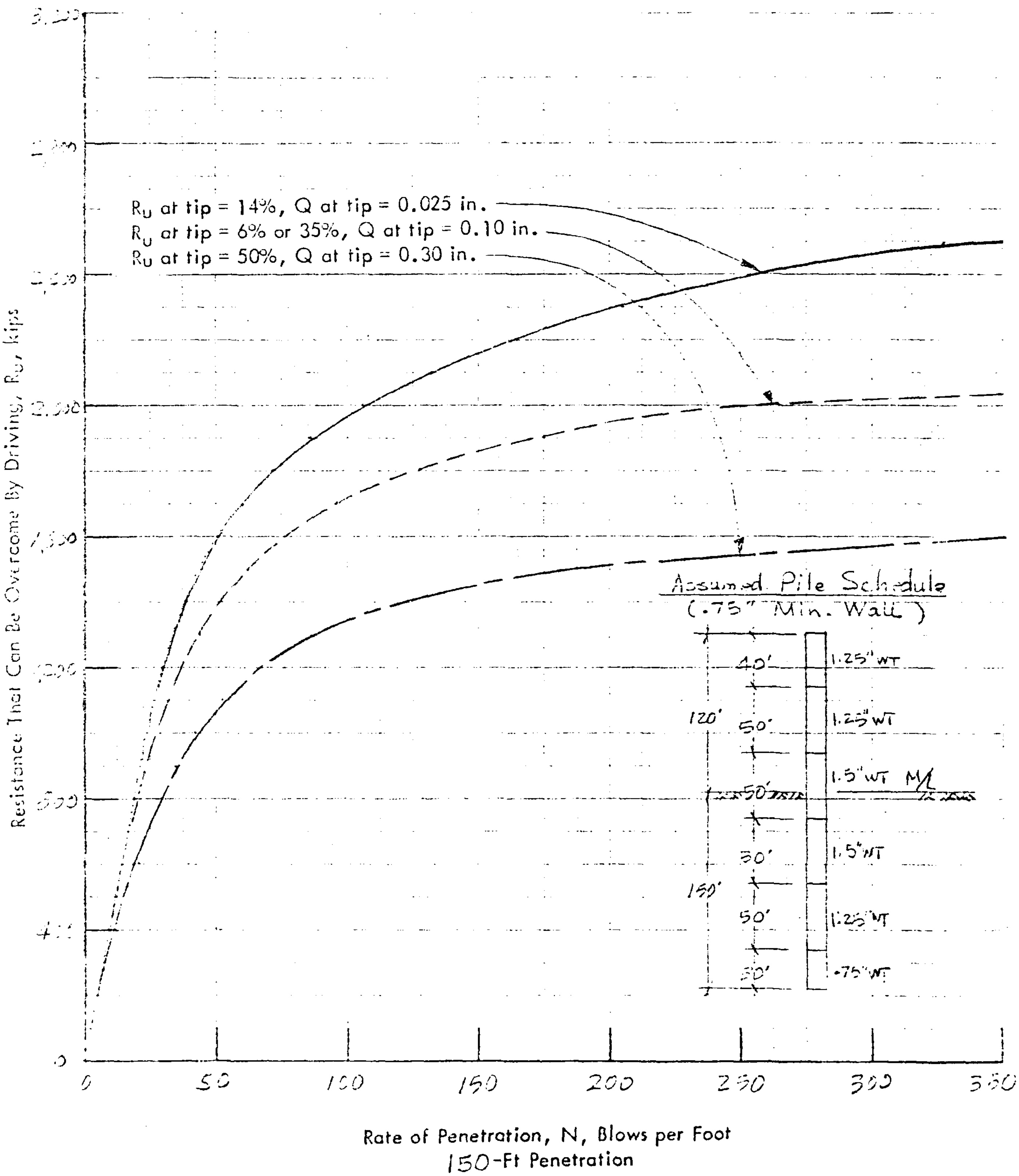
R_u at tip = 14%, Q at tip = 0.025 in.
R_u at tip = 6% or 35%, Q at tip = 0.10 in.
R_u at tip = 50%, Q at tip = 0.30 in.

Spring Constant = 2.78×10^6 lbs/in.
Damping Factor, side & tip, J = 0.15
Quake Factor, side, Q = 0.10 in.
Quake Factor, tip, - See Above

CREST OFFSHORE, INC.

Sheet 315 of 52

By C. Chen Client U.S. NAVY Subject Structural Concept Analysis
Date 4-12-75 Job No. 27-272.00 Calculation Pile Driving Analysis



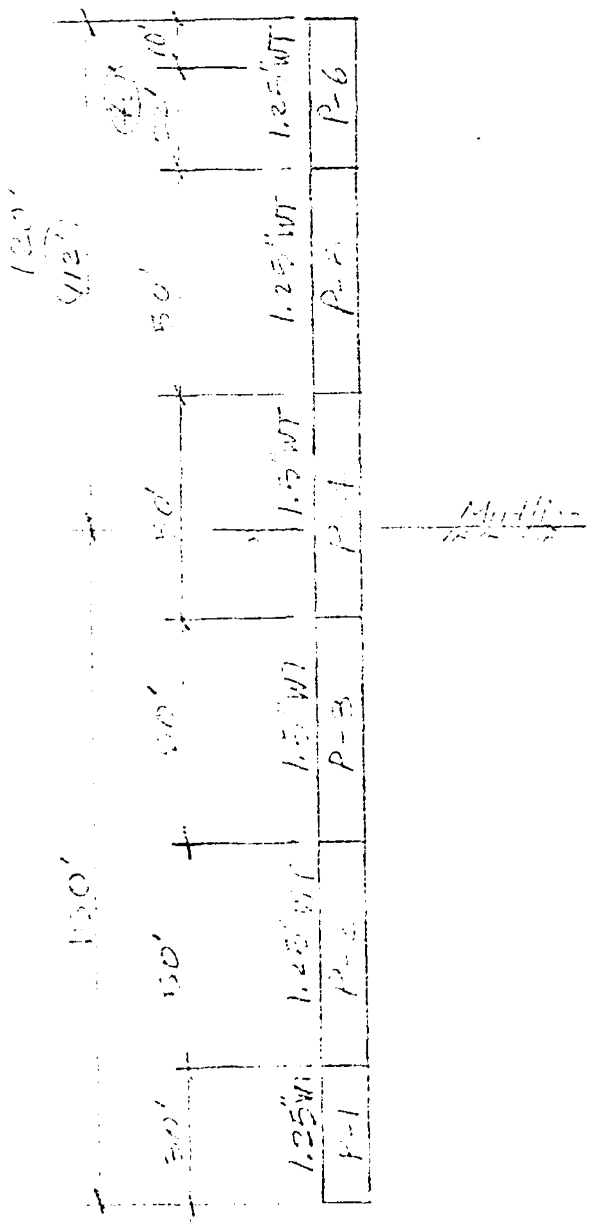
CREST OFFSHORE, INC.

Sheet 3.1.2 of 25

By C. Chern Client U.S. NAVY Subject Structural Concept Evaluation

Date 4-19-76 Job No. 27-771-22 Calculation Pile Driving Results - Case

Assumed Pile Schedule -- 150 FT PENETRATION
1.25" WALL THK. MIN.



Vulcan 040 Hammer
Wt. of Ram = 40,000 lbs
Rated Energy = 120,000 ft-lbs
Hammer Efficiency = 0.75
Wt. of Pile Cap = 27,800 lbs

R_u at tip = 14%, Q at tip = 0.025 in.
R_u at tip = 6% or 35%, Q at tip = 0.10 in.
R_u at tip = 50%, Q at tip = 0.30 in.

Spring Constant = 2.78×10^6 lbs/in.
Damping Factor, side & tip, J = 0.15
Quake Factor, side, Q = 0.10 in.
Quake Factor, tip, - See Above

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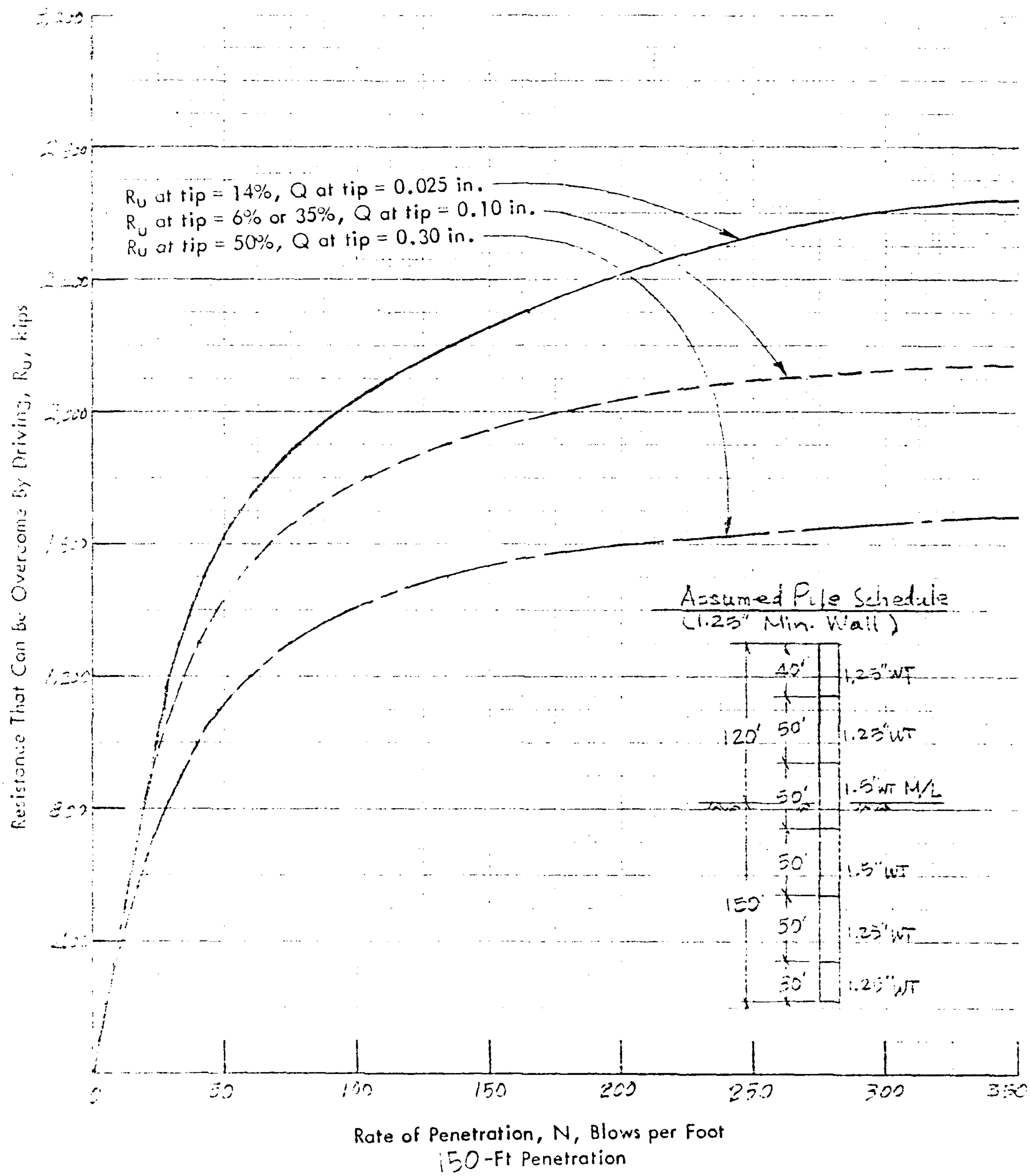
Sheet __ of 22

By C. Ch___ Client U.S. NAVY Subject ___

Date 4-_0-__ Job No. 27-271-92 Calculation ___

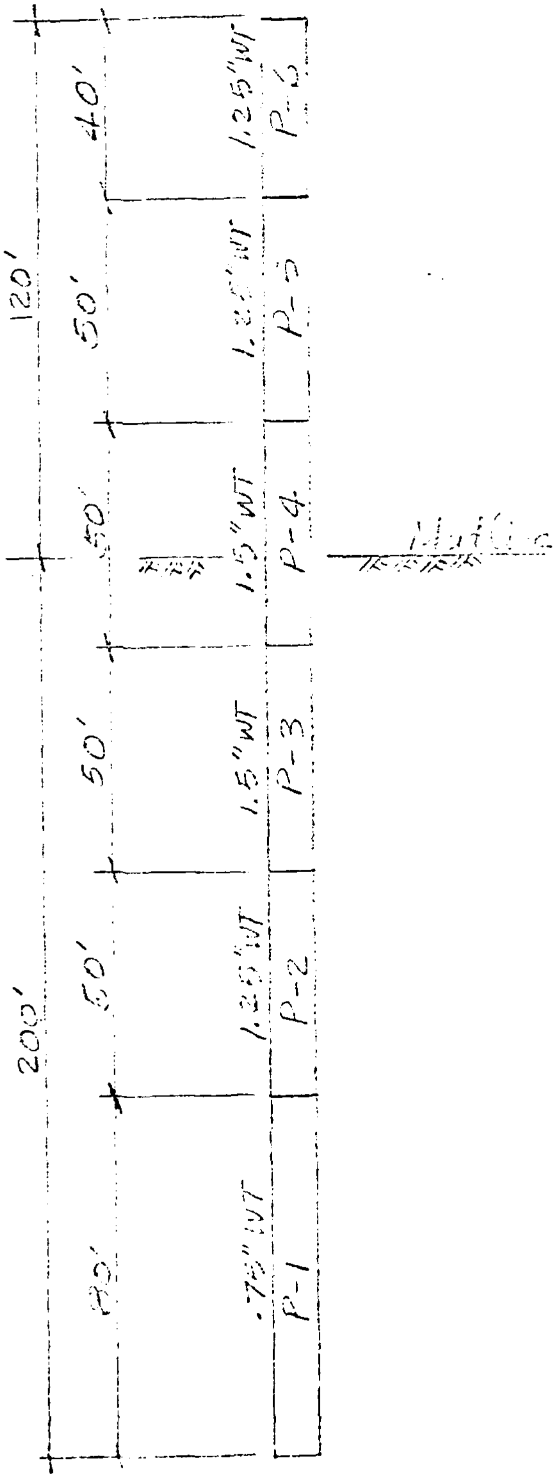


CREST OFFSHORE, INC.

Sheet 3-15 of 23

By C. Chern Client U.S. NAVY Subject Structural Concept Analysis
Date 4-19-76 Job No. 27-271 Calculation Pile Driving Resistance Curves

Assumed Pile Schedule -- 200 FT PENETRATION
.75" WALL THK. MIN.



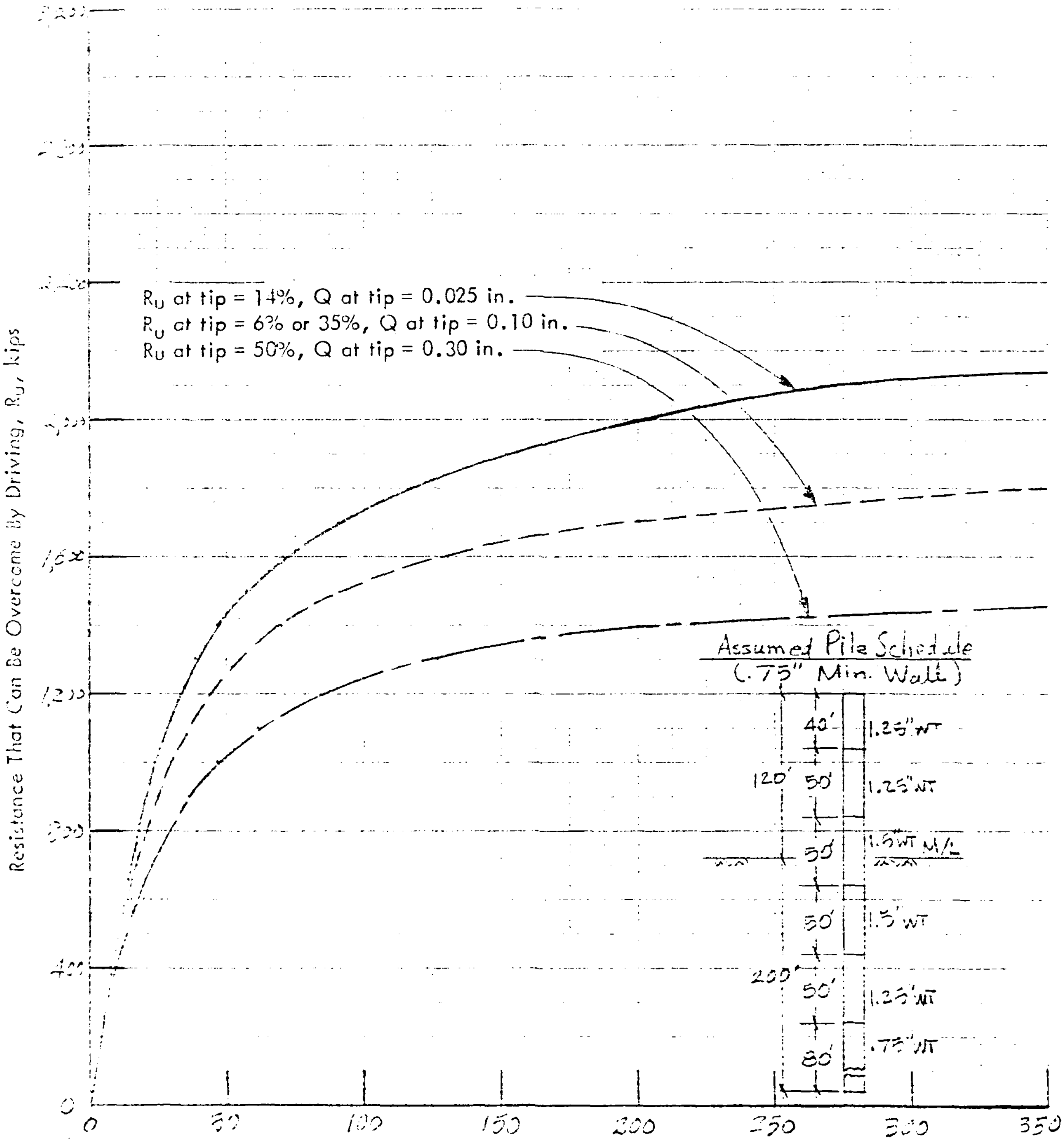
Vulcan 040 Hammer
Wt. of Ram = 40,000 lbs
Rated Energy = 120,000 ft-lbs
Hammer Efficiency = 0.75
Wt. of Pile Cap = 27,800 lbs

Spring Constant = 2.78×10^6 lbs/in.
Damping Factor, side & tip, J = 0.15
Quake Factor, side, Q = 0.10 in.
Quake Factor, tip, - See Above

CREST OFFSHORE, INC.

Sheet 2-19 of 23

By [illegible] Client U.S. NAVY Subject [illegible]
Date [illegible] Job No. [illegible] Calculation [illegible]



Rate of Penetration, N, Blows per Foot

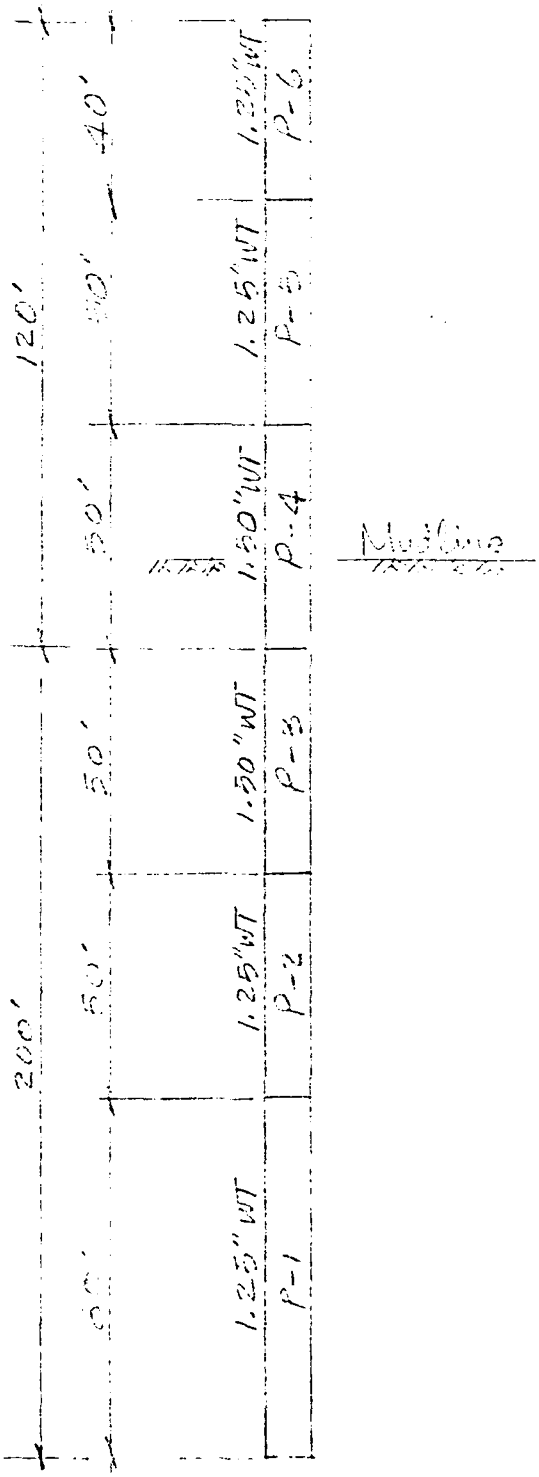
200-Ft Penetration

CREST OFFSHORE, INC.

Sheet 3-2 of 33

By C. Chen Client U.S. NAVY Subject [illegible]
Date 4-19-76 Job No. 37-771-92 Calculation [illegible]

Assumed Pile Schedule -- 200 FT PENETRATION
1.25" WALL THK. MIN.



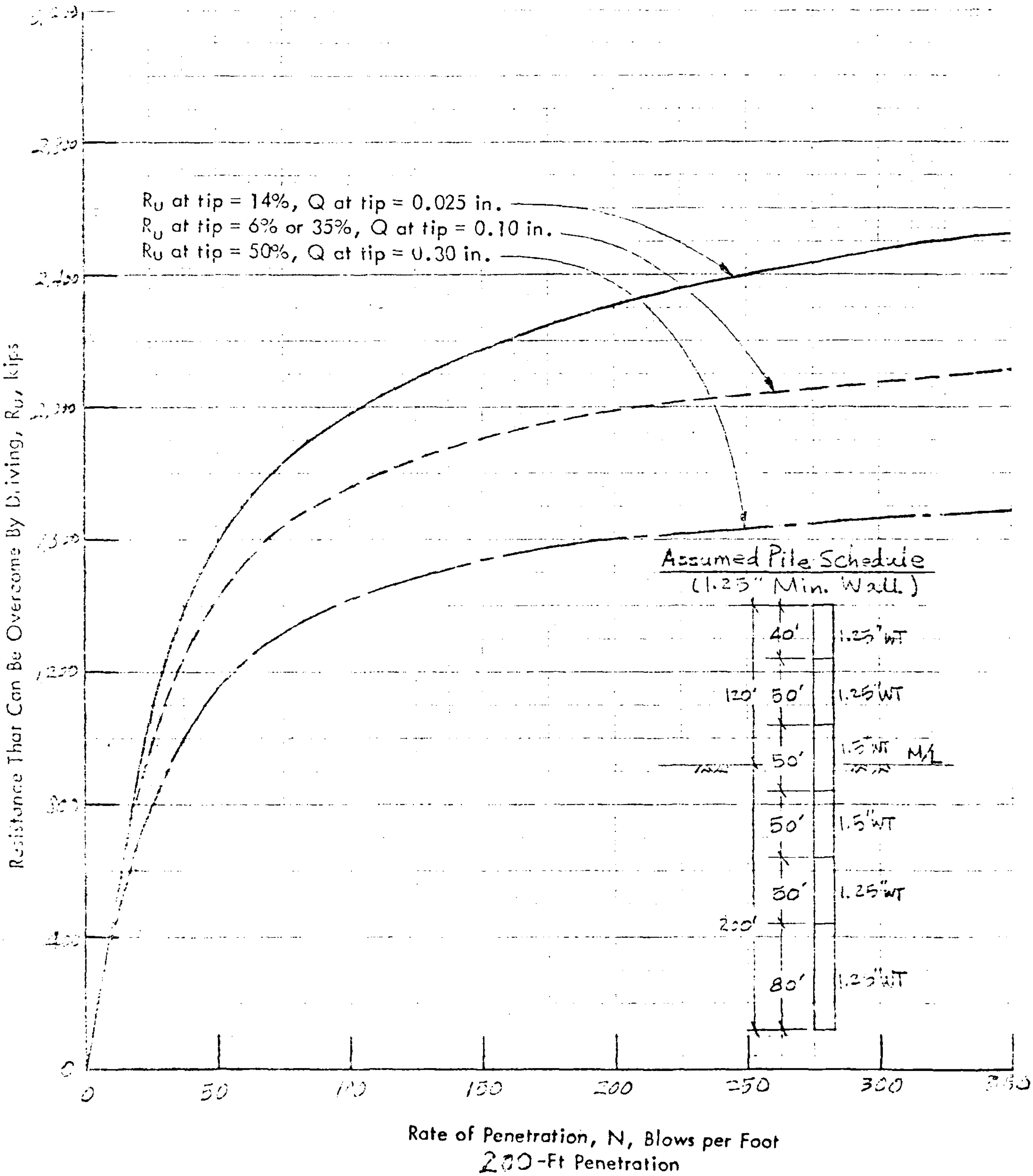
Vulcan 040 Hammer
Wt. of Ram = 40,000 lbs
Rated Energy = 120,000 ft-lbs
Hammer Efficiency = 0.75
Wt. of Pile Cap = 27,800 lbs

Spring Constant = 2.78×10^6 lbs/in.
Damping Factor, side & tip, J = 0.15
Quake Factor, side, Q = 0.10 in.
Quake Factor, tip, - See Above

CREST OFFSHORE, INC.

Sheet 3-21 of [illegible]

By [illegible] Client U.S. NAVY Subject Structural Concept Analysis [illegible]
Date [illegible] Job No. 27-[illegible]-02 Calculation Pile Driving Resistance Curves

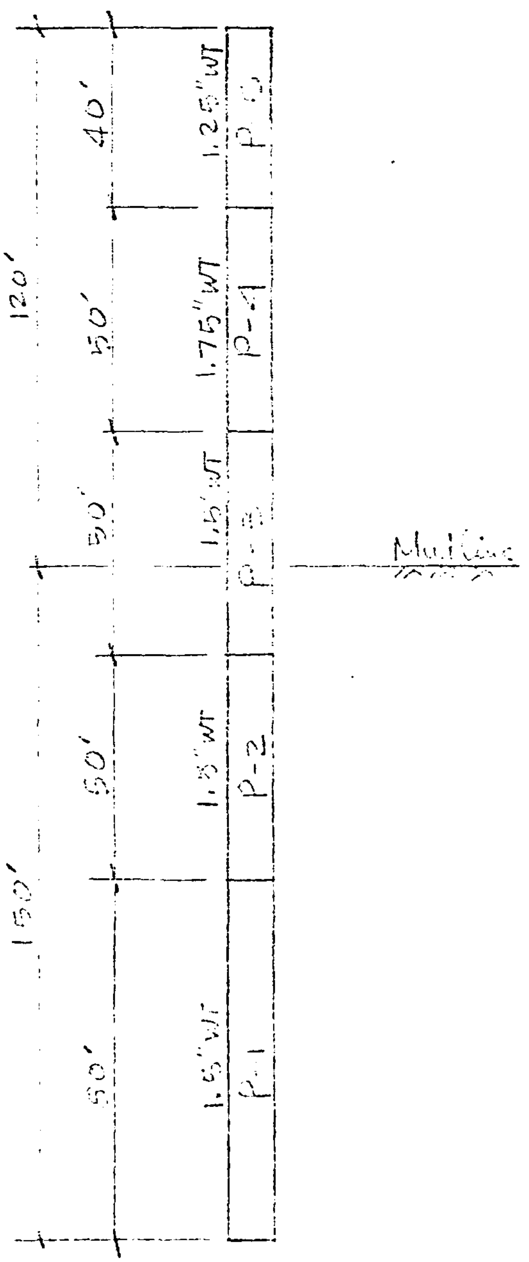


CREST OFFSHORE, INC.

Sheet 3-22 of

By C. Chern Client U.S. NAVY Subject Structural Concept Analysis
Date 4-20-76 Job No. 27-771-92 Calculation Pile Driving Resistance Curves

Assumed Pile Schedule -- 150 FT PENETRATION
1.5" WALL THK. MIN.



Vulcan 060 Hammer
Wt. of Ram = 60,000 lbs
Rated Energy = 180,000 ft-lbs
Hammer Efficiency = 0.75
Wt. of Pile Cap = 40,200 lbs

Spring Constant = 3.24×10^6 lbs/in.
Damping Factor, side & tip, J = 0.15
Quake Factor, side, Q = 0.10 in.
Quake Factor, tip, - See Above

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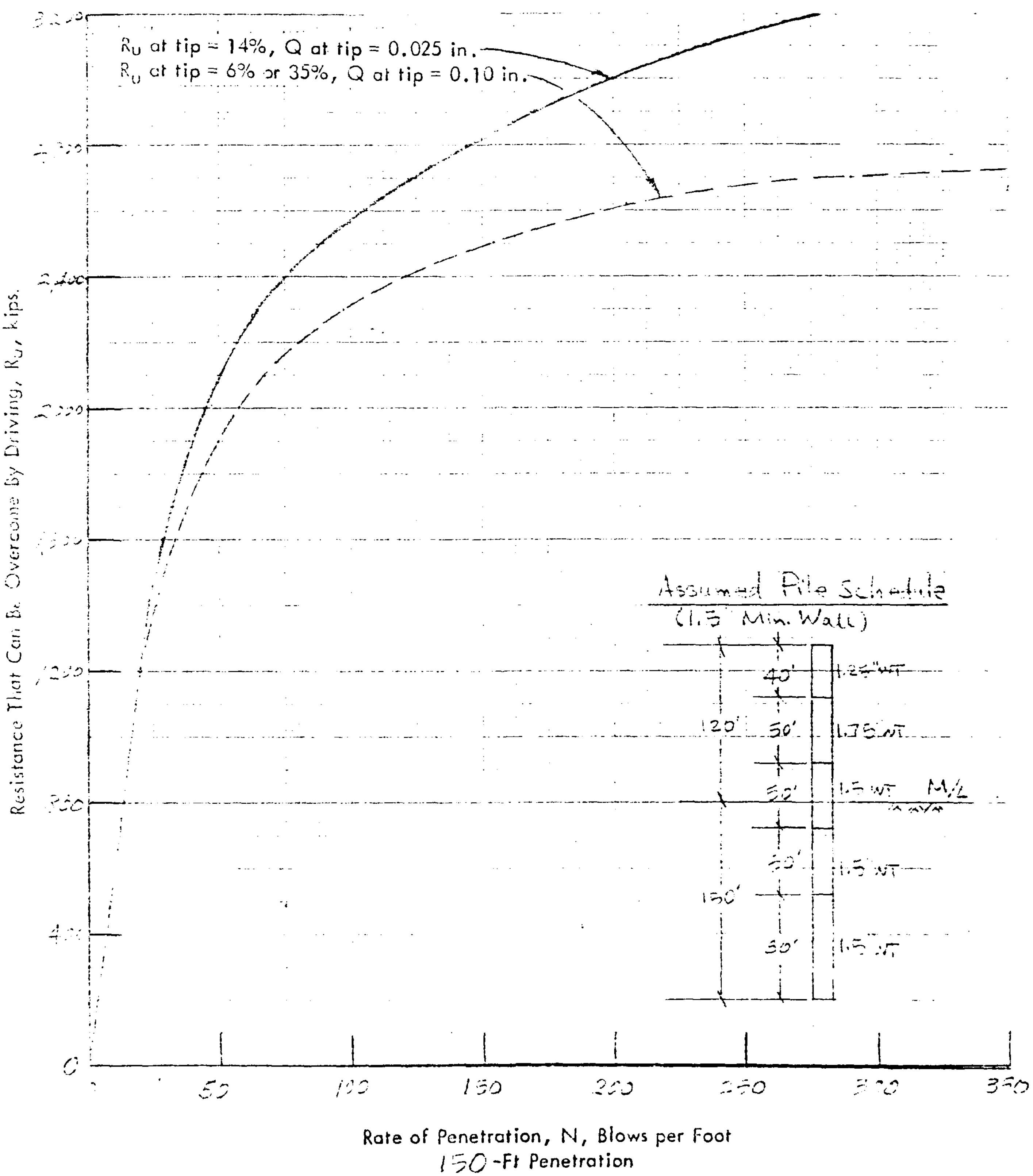
Sheet 83 of 91

By C. Stern Client U.S. NAVY Subject Structural Concept Analysis

Date 9-24-76 Job No. 27-771-02 Calculation Pile Driving Resistance Curves

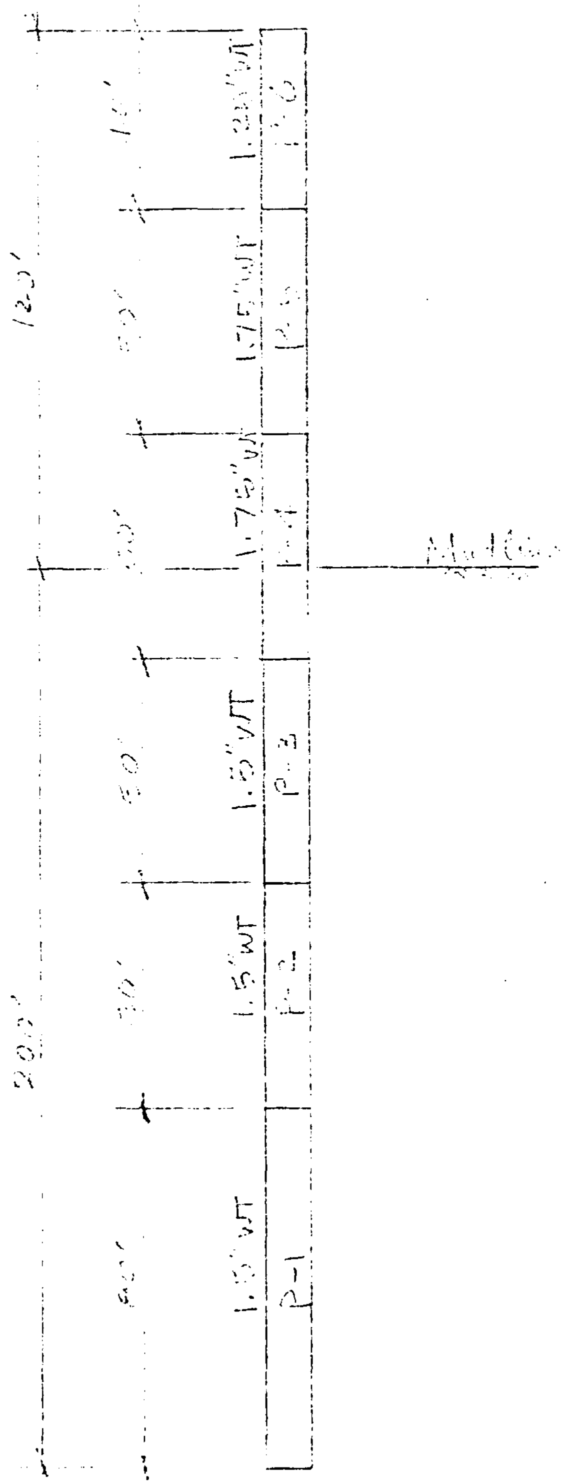


CREST OFFSHORE, INC.

Sheet 3-24 of 35

By C. Chen   Client U.S. NAVY   Subject Structural Concept ...
Date 4-...-75   Job No. ...   Calculation on Pile Driving Resistance Curve

Assumed Pile Schedule -- 200 FT PENETRATION 1.5" WALL THK. MIN.



Vulcan 060 Hammer
Wt. of Ram = 60,000 lbs
Rated Energy = 180,000 ft-lbs
Hammer Efficiency = 0.75
Wt. of Pile Cap = 40,200 lbs

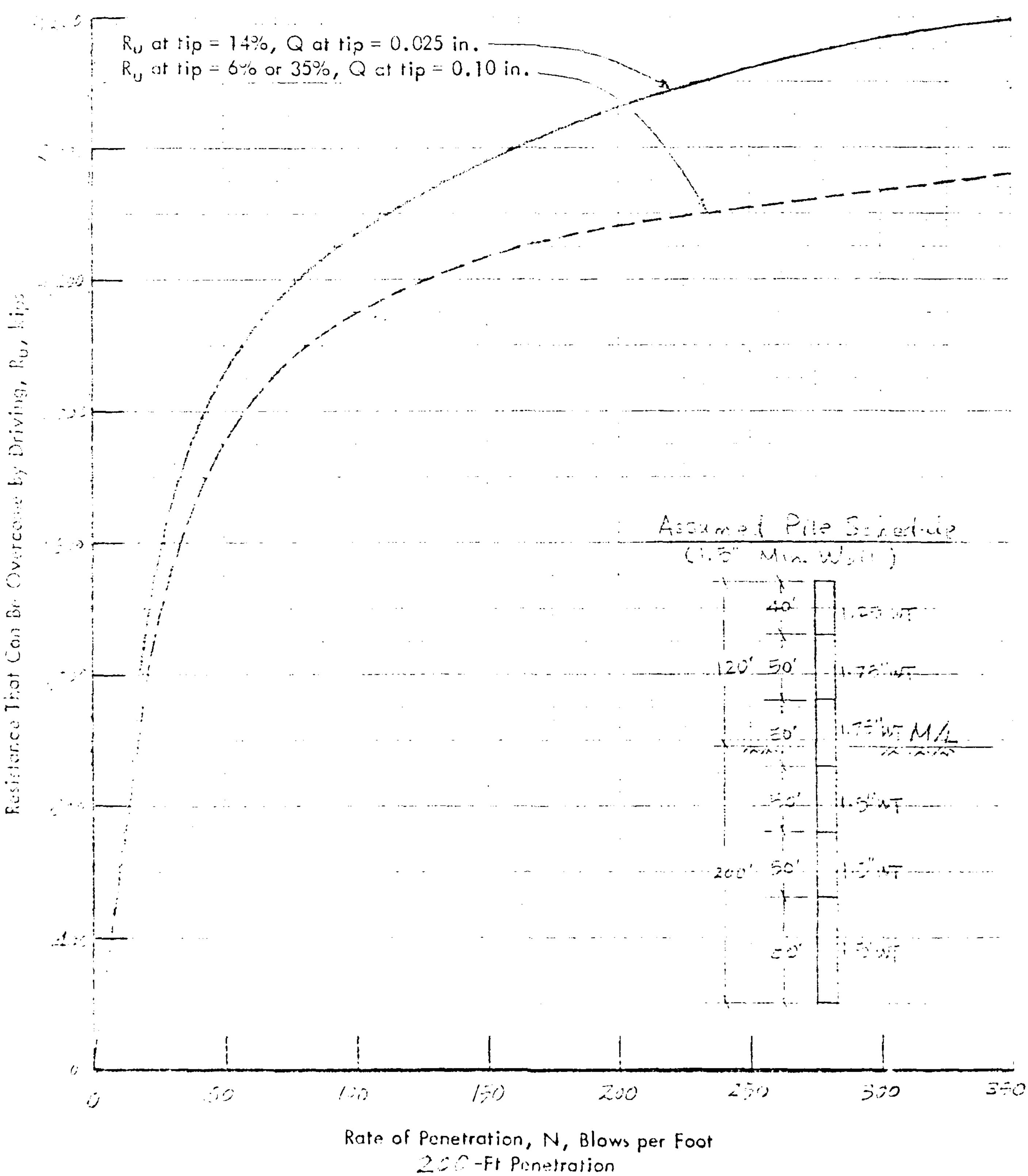
Spring Constant = 3.24×10^6 lbs/in.
Damping Factor, side & tip, J = 0.15
Quake Factor, side, Q = 0.10 in.
Quake Factor, tip, - See Above

CREST OFFSHORE, INC.

Sheet ___ of ___

By ___ Client U.S. NAVY Subject Structural Concept Analysis

Date ___ Job No. ___ Calculation Pile Driving ___



SECTION 4

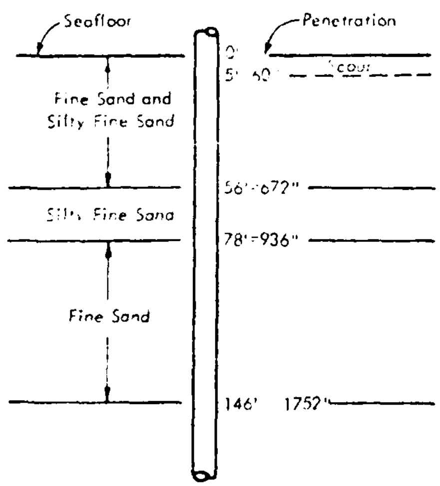
LATERALLY LOADED PILE CAPACITY

4.1 INTRODUCTION

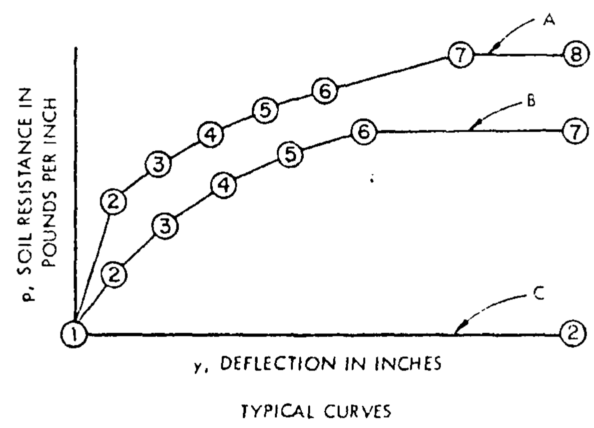
This section evaluates the pipe pile capacity under lateral loads. The computer program used to perform the computation was developed by T. A. Haliburton at Oklahoma State University. The program printouts were compiled in APPENDIX A.3.

4.2 SOIL DATA

[illegible] DIAMETER PIPE PILES																			
Penetration, Inches	Typical Curve	Coordinates of Curve Points																	
		y1	p1	y2	p2	y3	p3	y4	p4	y5	p5	y6	p6	y7	p7	y8	p8	y9	p9
[illegible]	C		[illegible]	20.00															
96	[illegible]	[illegible]	[illegible]	0.016	[illegible]	[illegible]	100	0.16	124	0.30	140	0.50	159	1.13	203	20.00	203		
[illegible]	A	[illegible]	0	0.0288	155	0.062	475	0.17	772	0.29	995	0.50	1287	1.13	2059	20.00	2059		
[illegible]	A	[illegible]	0	[illegible]	591	0.071	1056	0.19	1646	0.30	2101	0.50	2703	1.13	4325	20.00	4325		
264	A		[illegible]	[illegible]	[illegible]	0.043	714	0.17	1156	0.29	1493	0.50	1933	1.13	3092	20.00	3092		
336	[illegible]	[illegible]	0	0.012	[illegible]	0.066	1145	0.17	1824	0.29	2341	0.50	3022	1.13	4836	20.00	4836		
[illegible]	A	0	0	[illegible]	63	[illegible]	1439	0.17	2278	0.29	2924	0.50	3774	1.13	6039	20.00	6039		
432	A	[illegible]	0	0.035	[illegible]	[illegible]	3119	0.19	4497	0.30	5611	0.50	7114	1.13	11383	20.00	11383		
672	A	[illegible]	0	0.034	3031	0.090	4853	0.19	6996	0.30	8729	0.50	11067	1.13	17707	20.00	17707		
673	B	0	0	0.054	553	0.13	750	0.34	1018	0.84	1382	2.10	1875	20.00	1875				
936	B	[illegible]	0	0.054	553	0.13	750	0.34	1018	0.84	1382	2.10	1875	20.00	1875				
937	A	0	0	0.034	4446	0.090	6756	0.19	9743	0.30	12157	0.50	15414	1.13	24663	20.00	24663		
1752	A	0	0	0.038	6424	0.090	12651	0.19	18239	0.30	22756	0.50	28853	1.13	46165	20.00	46165		



STRATIGRAPHY ASSUMED FOR P-Y DATA



TYPICAL CURVES

P-Y DATA
Boring 1

CREST OFFSHORE, INC.

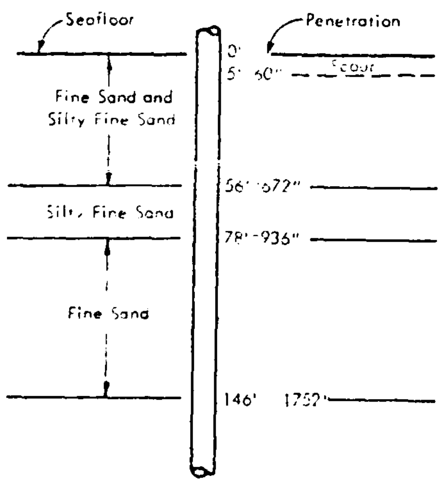
Sheet 4.93 of 12

By C. Chen   Client U.S. NAVY   Subject [illegible]

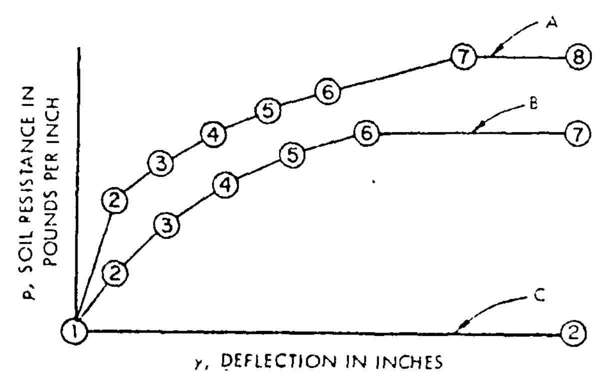
Date [illegible]   Job No. [illegible]   Calculation [illegible]

48-IN. DIAMETER PIPE PILES

Depth inches	Type Curve	Coordinates of Curve Points															
		y_1	P_1	y_2	P_2	y_3	P_3	y_4	P_4	y_5	P_5	y_6	P_6	y_7	P_7	y_8	P_8
0 - 160	C	0	0	20.	0												
96	A	0	[illegible]	[illegible]	85	0.070	120	0.18	145	0.30	168	0.50	190	1.13	244	20.0	244
168	A	0	0	[illegible]	222	0.068	574	0.17	926	0.29	1194	0.50	1544	1.13	2471	20.0	2471
[illegible]	A	0	0	[illegible]	637	0.071	1267	0.18	1975	0.30	2521	0.50	3241	1.13	5190	[illegible]	5190
264	A	0	0	0.081	320	0.063	857	0.17	1390	0.29	1798	0.50	2320	1.13	3710	20.0	3710
336	A	0	0	0.012	606	0.066	1374	0.17	2189	0.29	2809	0.50	3626	1.13	5803	20.0	5803
420	A	0	0	0.012	756	0.066	1716	0.17	2734	[illegible]	3509	[illegible]	4529	1.13	7247	20.0	7247
432	A	0	0	0.038	2412	0.090	5743	0.19	5396	0.30	6733	0.50	8537	1.13	13660	20.0	13660
672	A	0	0	0.038	2277	0.090	5824	0.19	8395	0.30	10475	0.50	13280	1.13	21248	20.0	21248
673	B	0	0	0.034	634	0.13	900	0.34	1222	0.84	1658	2.10	2250	20.0	2250		
936	B	0	0	0.034	634	0.13	900	0.34	1222	0.84	1658	2.10	2250	20.0	2200		
937	A	0	0	0.038	5395	0.090	8107	0.19	11692	0.30	14388	0.50	18497	1.13	29596	[illegible]	29596
1752	A	0	0	[illegible]	10109	0.090	15181	[illegible]	21887	0.30	27307	0.50	34624	1.13	55398	[illegible]	55398



STRATIGRAPHY ASSUMED FOR P-Y DATA



TYPICAL CURVES

P-Y DATA

Boring 1

By C. Chen Client U.S. NAVY Subject Structural Concept Analysis 6-pile
Date 4-22-76 Job No. 27-771-92 Calculation Laterally Loaded Pile Capacity

4.3 SECTION PROPERTIES

(1) Dimensions

36" O.D. x 1.75" WT

$$I_1 = 27,633.00 \ in^4$$

$$A_1 = 188.3 \ in^2$$

36" O.D. x 1.50" WT

$$I_2 = 24,234.25 \ in^4$$

$$A_2 = 162.58 \ in^2$$

(ii) Pile Top Restraint

$$k = \frac{3.5\,EI}{L} \qquad \left(= \frac{M}{\theta}\right)$$

where $E = 29{,}000$ ksi

36"⌀ x 1.75" WT $I = 27{,}633.0\ in^4$

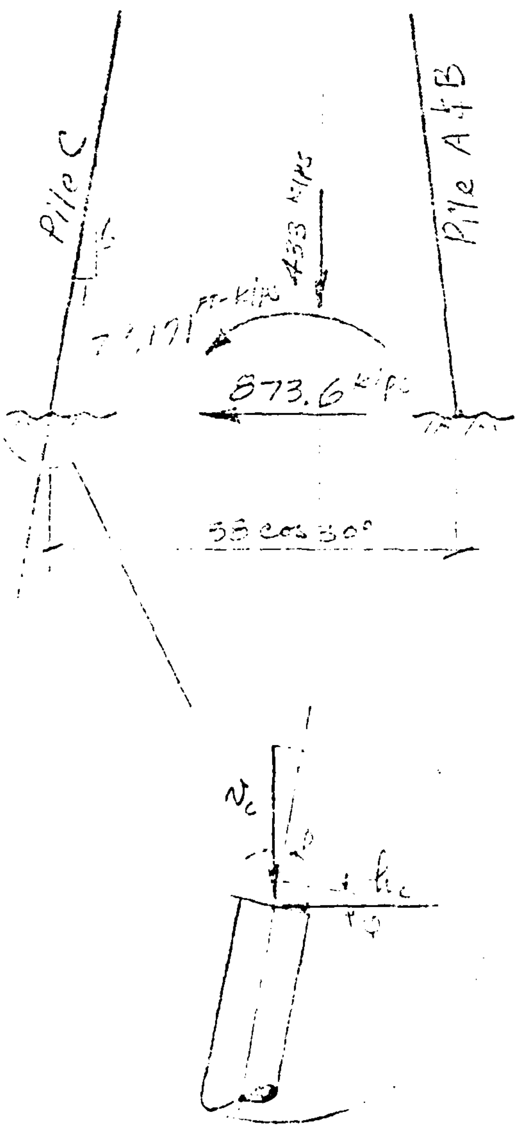
$L = 32^{ft} = 384^{in}$

$$k = \frac{3.5 \times 29{,}000 \times 27{,}633.0}{384} \qquad \left(\frac{k}{\text{[illegible]}} = \text{[illegible]}\right)$$

$= 7{,}317{,}251$ in-kips/rad.

(iii) Loadings at Pile Top (Pile C)

(See Computer Printout) Mom. due to wind and wave of SEALOAD-2



$M_W + M_{WN} = 64,837$ FT-KIPS

Mom. due to boat landing

$M_{BL} = 4,206$ FT-KIPS

Mom. due to Stairs

$M_{ST} = 10,123$ FT-KIPS

Total moment $M = 79,171$ FT-KIPS at mudline

Total vertical load $P = 433$ KIPS

Shear due to Wind and wave

$V_W + V_{WN} = 744$ kips

Shear due to Boat Landing

$V_{BL} = 48.4$ kips

Shear due to Stairs

$V_{ST} = 81.2$ KIPS

Total Shear $= 873.6$ kips at mudline

Max. Compression

$$h_c = \frac{1}{3}V = 291.2 \text{ kips}$$

$$v_c = \frac{M}{53\cos 45°} + \frac{P}{3} = 1576.2 + 144.3$$

$$= 1720.5 \text{ kips}^{**}$$

Axial Compression $A_c = v_c \cos\phi + h_c \sin\phi$

$$= 1720.5 \times \frac{6}{\sqrt{37}} + 291.2 \times \frac{1}{\sqrt{37}}$$

$$= 1697.1 + 47.9$$

$$= 1745. \text{ kips}$$

Shear $S_c = h_c \cos\phi - v_c \sin\phi$
(under Axial Compression)

$$= 291.2 \times \frac{6}{\sqrt{37}} - 1720.5 \times \frac{1}{\sqrt{37}}$$

$$= 287.2 - 282.8$$

$$= 4.4 \text{ kips}$$

Check: ** $v_c = 1860$ kips (Axial compression including live and additional load on equipment deck and top deck)

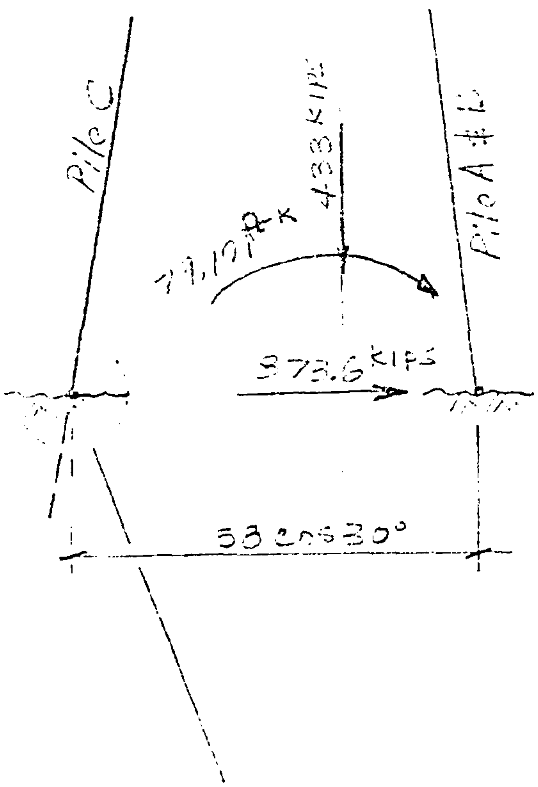
$$S_c = 287.2 - 305.8$$

$$= 18.6 \text{ kips}$$ < 51.8 kips (shear under axial tension)

Max. Tension

$$v_t = \frac{M}{58\cos 30°} - \frac{P}{3} = 1431.9 \text{ kips}$$

$$h_t = h_c = 291.2 \text{ kips}$$



Axial Tension

$$A_T = v_t \cos\phi + h_t \sin\phi$$

$$= 1431.9 \times \frac{6}{\sqrt{37}} + 291.2 \times \frac{1}{\sqrt{37}}$$

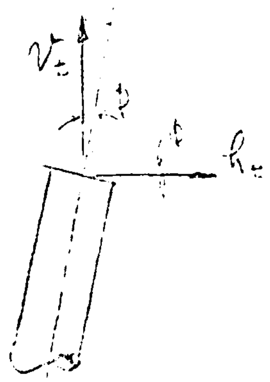
$$= 1460 \text{ KIPS}$$

Shear

$$S_t = v_t \sin\phi - h_t \cos\phi$$

$$= 1431.9 \times \frac{1}{\sqrt{37}} - 291.2 \times \frac{6}{\sqrt{37}}$$

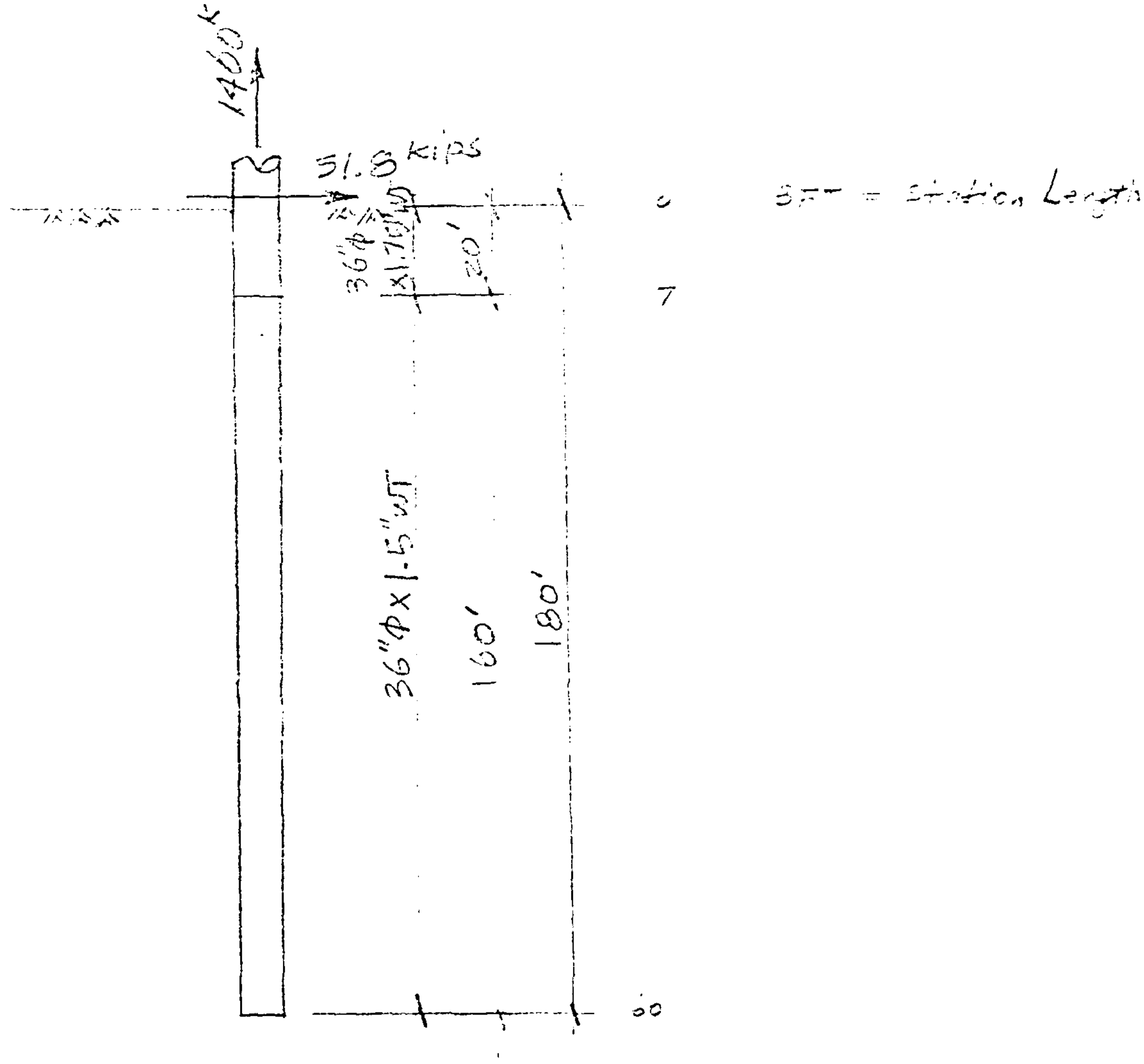
$$= -51.8 \text{ kips}$$



CREST OFFSHORE, INC.

By C. Shore Client U.S. NAVY Subject Structural Concept Analysis
Date 1-22-76 Job No. 22-771-92 Calculation Laterally Loaded Pile Capacity

(iv) Estimated Penetration - 150 FT Below mud line



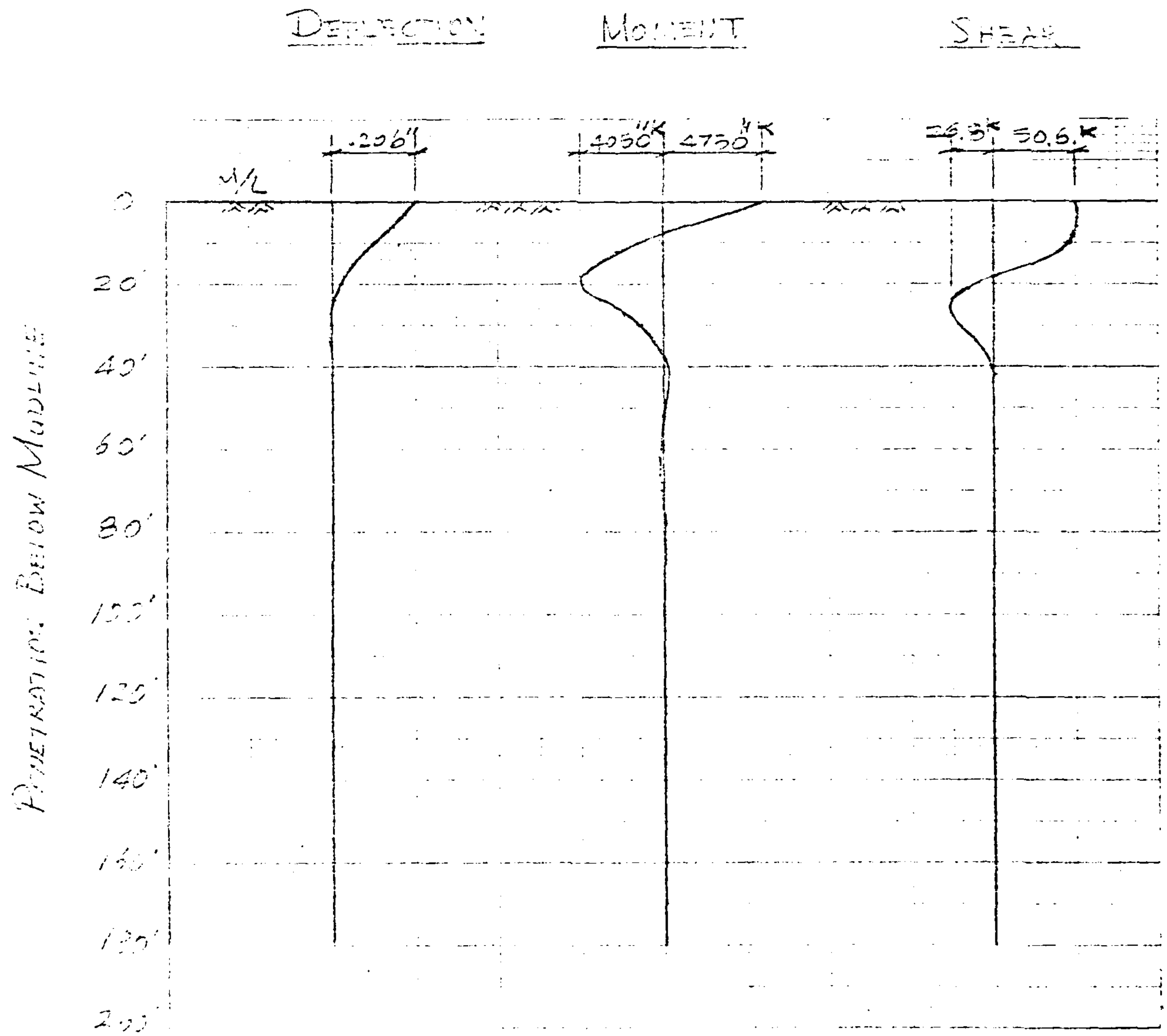
CREST OFFSHORE, INC.

Sheet 4.10 of 12

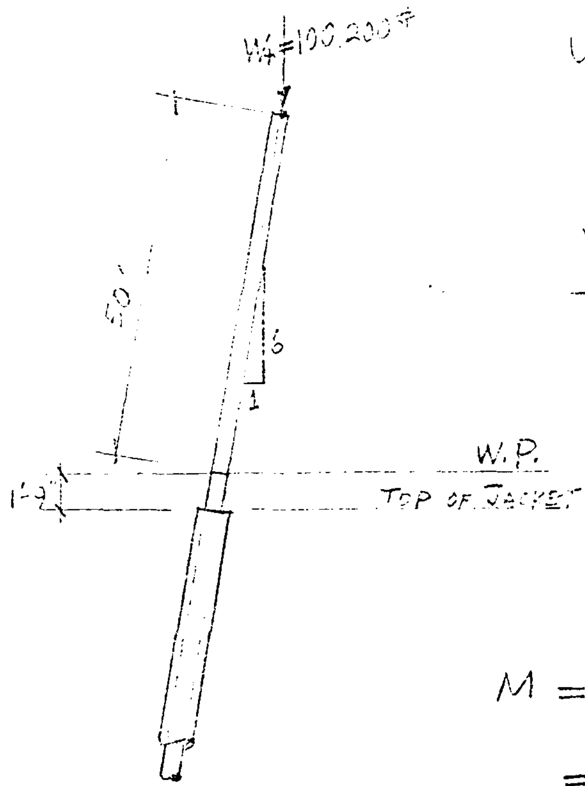
By C. Chern Client U.S. NAVY Subject Structural Concept Analysis

Date 4-23-86 Job No. 27-771-92 Calculation Lateral Pile Capacity

4.4 SHEAR, MOMENT AND DEFLECTION DIAGRAMS



4.5 Minimum Wall Thickness Requirements



Use Vulcan 060 Hammer

Wt. of Hammer = 60,000 LBS

Wt. of Pile Cap = 40,200 LBS

Total Wt. = 100,200 LBS

Bending moment at the top of jacket leg is

$$M = 100,200 \times \left[\frac{1}{6}(51.75)\right]$$

$$= 864,225 \text{ ft-Lbs}$$

Axial Compression at the top of jacket leg (Piling)

$$P = 100,200 \times \frac{6}{\sqrt{37}} = 98,837 \text{ LBS}$$

36" O.D. x 1.25" WT $\quad I = 20,630 \text{ in}^4$

$$A = 136.5 \text{ in}^2$$

Combined Stress $\quad \sigma_c = \frac{M\frac{d}{2}}{I} + \frac{P}{A}$

$$\sigma_c = \frac{(864,225 \times 12) \times 18}{20,630} + \frac{98,837}{136.5}$$

CREST OFFSHORE, INC.

By S. Chen Client U.S. NAVY Subject Structural Concept Analysis
Date 4-23-86 Job No. 27-771-22 Calculation Lateral Load Pile Capacity

$$\sigma_c = 9{,}773 \text{ psi}$$
$$= 9.8 \text{ ksi}$$

Use Impact factor of 2 for the dynamic effect on piles during driving:

$$\sigma_{cd} = 2 \times \sigma_c = 19.6 \text{ ksi} < 22 \text{ ksi}$$

Say O.K.

SECTION 5

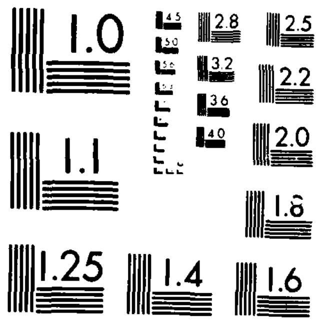
AXIAL PILE CAPACITY REQUIREMENTS

5.1 INTRODUCTION

The attempt of this section is to develop axial pile capacity requirements for the three-pile structure under a set of given loading conditions. The results serve as guide lines for optimizing structural steel weight as presented in the following section (Section 6).

AD-A164 421 STRUCTURAL CONCEPT ANALYSIS REPORT FOR THE EAST COAST AIR COMBAT MANEUVER.. (U) CREST ENGINEERING INC TULSA OK MAY 76 27-771-92-APP-C CHES/NAVFAC-FPO-7601-APP-C 2/7

UNCLASSIFIED N62477-76-C-0179 F/G 13/13 NL



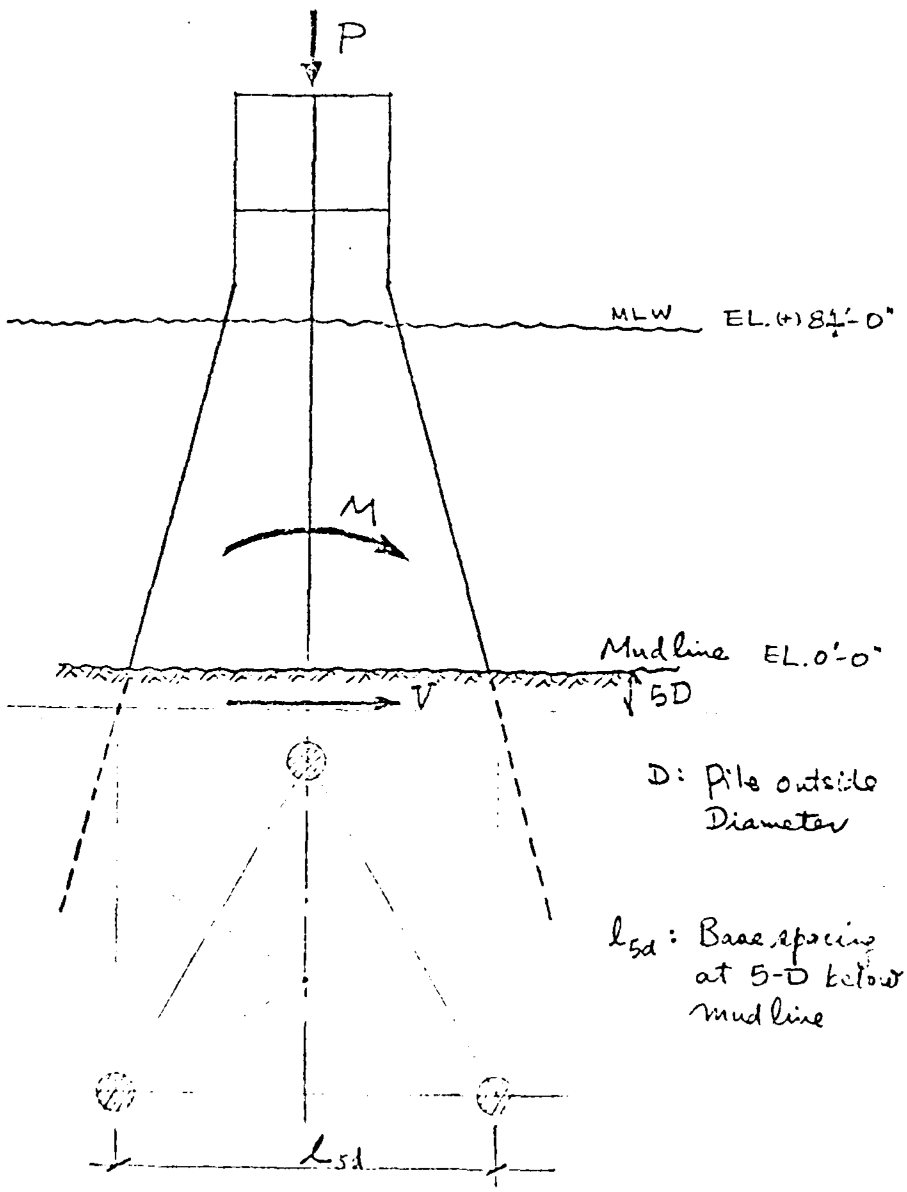
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS 1963-A

[illegible] LOADING CONDITIONS ON STRUCTURE

Total Gravity Load $P = 450$ kips

Base shear $V = 1254.6$ kips

Moment $M = 107,302$ ft-kips

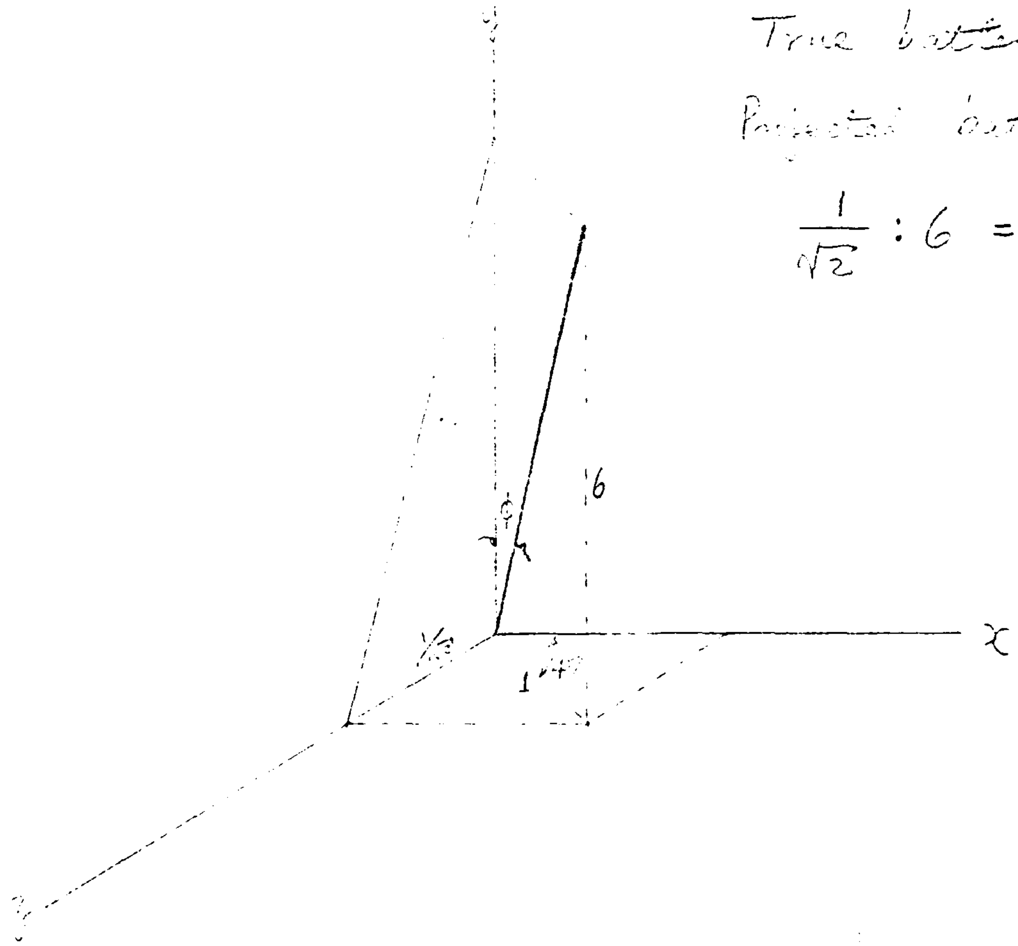


By [illegible] Client [illegible] Subject Structural Concept Analysis [illegible]
Date [illegible] Job No. [illegible] Calculation Axial Pile Capacity [illegible]

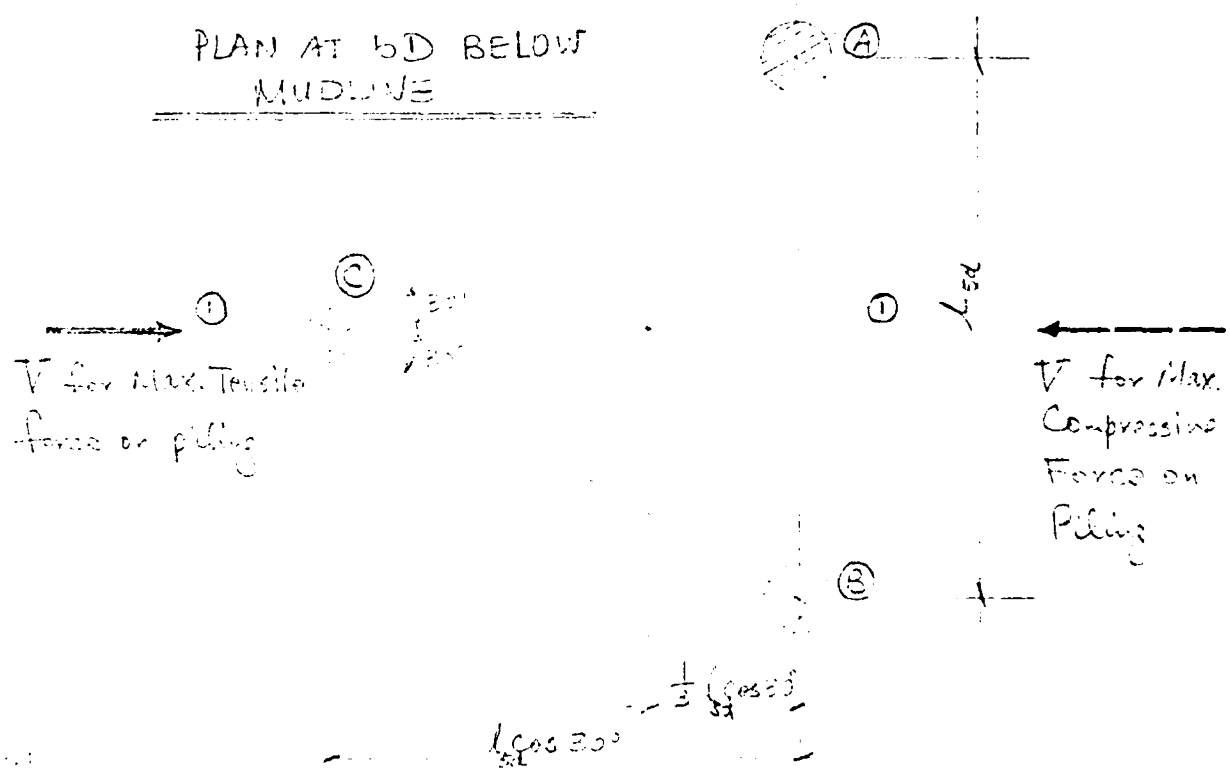
True batter of piles 1:6

Projected batter of piles

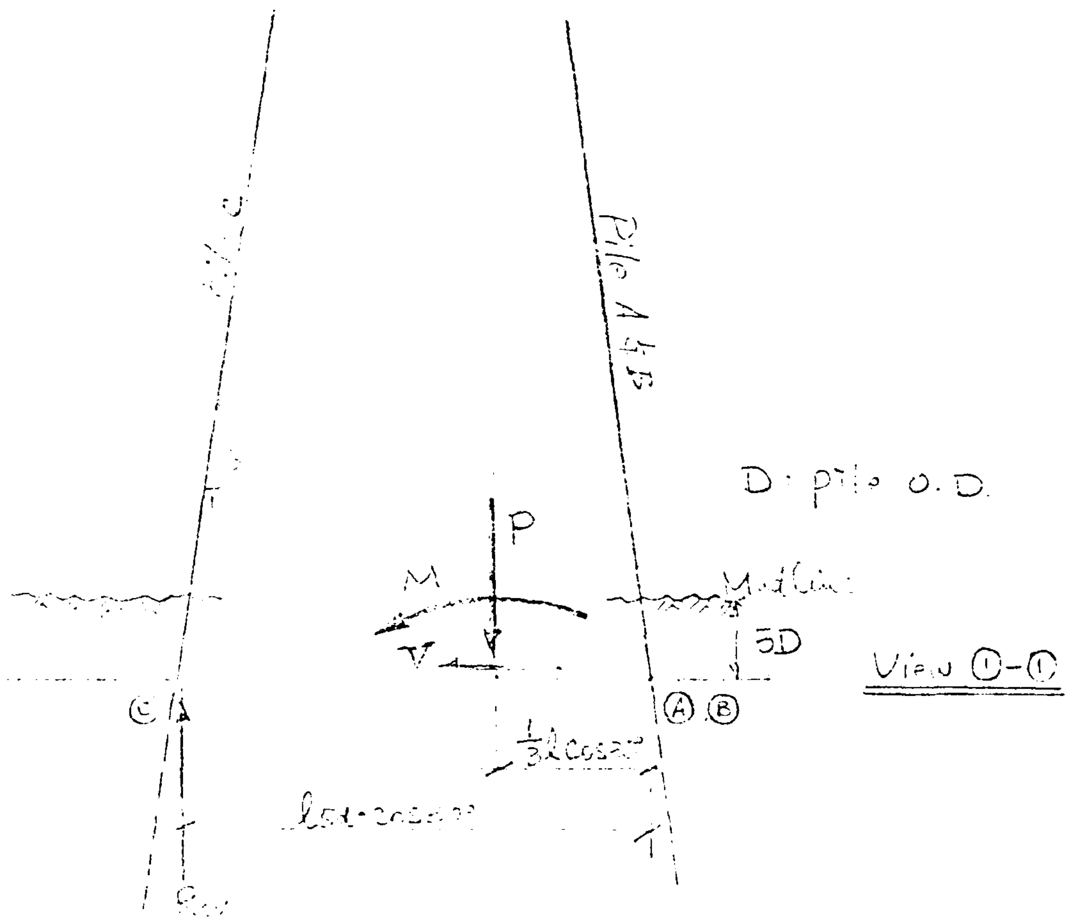
$$\frac{1}{\sqrt{2}} : 6 = 1 : 8.485$$

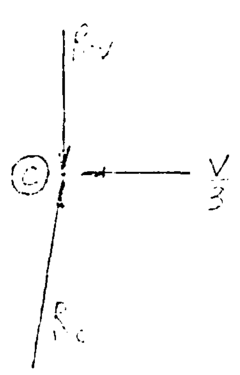


PLAN AT 5D BELOW MUDLINE



5.3 PILE CAPACITY REQUIREMENT IN COMPRESSION





$$R_c = \frac{6}{\sqrt{37}} R_{cv} + \frac{1}{\sqrt{37}} \frac{V}{3} \qquad (1)$$

$$R_{cv} = \frac{\sqrt{37}}{6} R_c - \frac{1}{18} V \qquad (2)$$

Summation of moments about axis ①-②

$$R_{cv}\, l \cos 30° = M + \frac{P}{3} l_{sd} \cos 30° \qquad (3)$$

$$\left(R_{cv} - \frac{P}{3}\right) l_{sd} \cos 30° = M$$

$$l_{sd} = \frac{M}{\left(R_{cv} - \frac{P}{3}\right)\cos 30°} \qquad (4)$$

Substituting Eq. (1) into Eq. (4)

$$l_{sd} = \frac{M}{\left(\frac{\sqrt{37}}{6} R_c - \frac{V}{18} - \frac{P}{3}\right)\cos 30°} \qquad (5)$$

$M = 107{,}302$ ft kips

$P = 450$ kips $\qquad \frac{P}{3} = 150.$

$V = 1254.6$ kips $\qquad \frac{V}{18} = 69.7$

$$l_{sd} = \frac{123{,}902}{\frac{\sqrt{37}}{6} R_c - 219.7} \qquad (5a)$$

$$(R_c)_{min} = \frac{6 \times 219.7}{\sqrt{37}} = 216.7 \text{ kips}$$

CREST OFFSHORE, INC.

Sheet 2-36 of 14

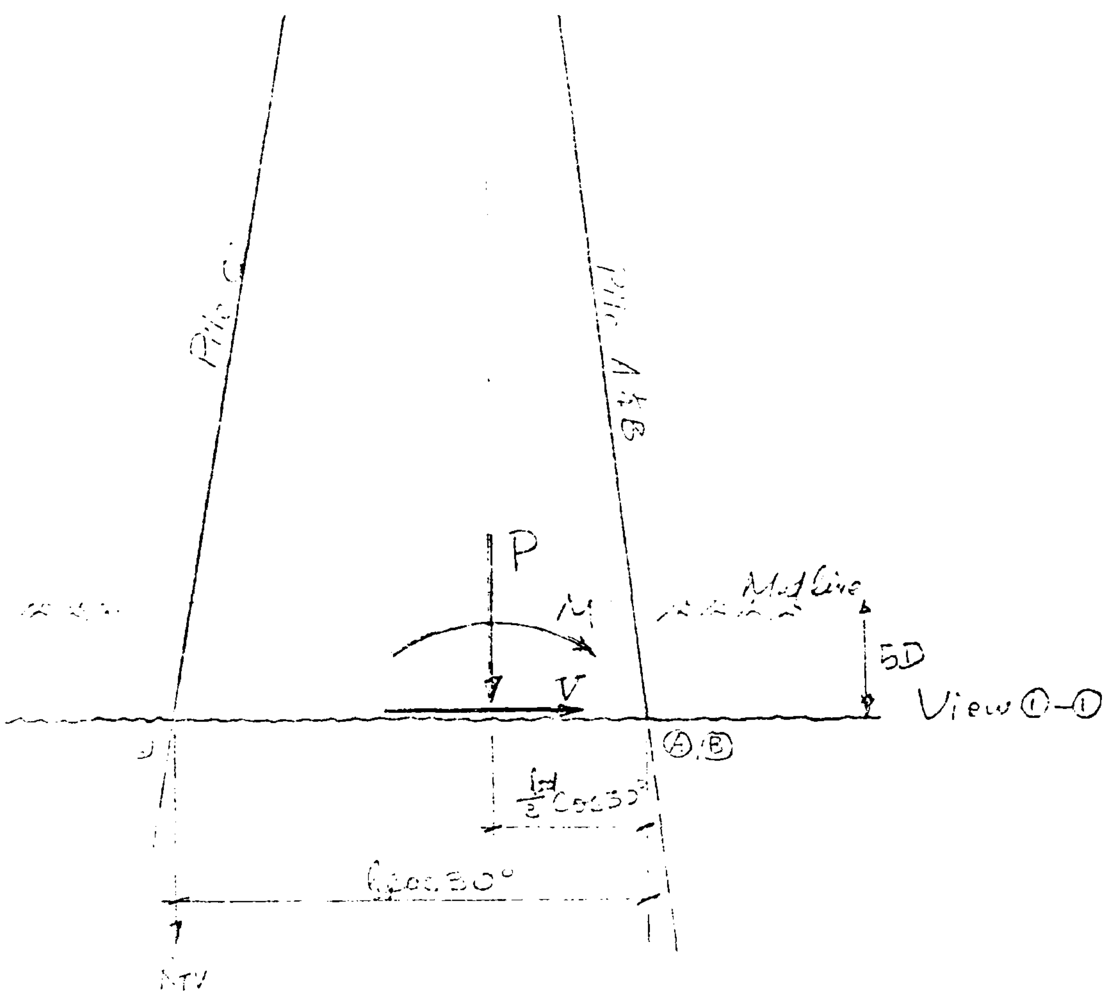
By G. Chase Client U.S. NAVY Subject Structural Concept Analysis
Date 3-30-76 Job No. 27-72E-14 Calculation Allowable Cap. l_s ...

$$l_{sd} = \frac{123{,}900}{\frac{\sqrt{37}}{6} R_c - 219.7}$$

R_c (K's)	$\frac{\sqrt{37}}{6} R_c - 219.7$	$l_{sd} = \frac{123{,}900}{\frac{\sqrt{37}}{6} R_c - 219.7}$ (ft)
216.7	0	∞
500.	287.2	431.4
750.	540.6	229.2
1,000.	794.1	156.0
1,250.	1,047.5	118.3
1,500.	1,301.0	95.2
1,750.	1,554.4	79.7
2,000.	1,807.9	68.5
2,250.	2,061.3	60.1
2,500.	2,314.8	53.5
2,750.	2,568.2	48.2
3,000.	2,821.7	43.9

By [illegible] Client [illegible] Subject [illegible]
Date [illegible] Job No. [illegible] Calculation [illegible]

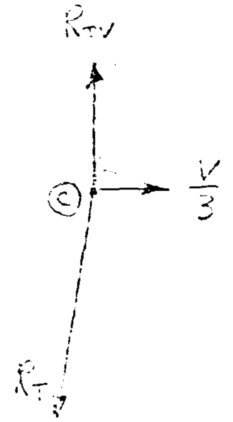
5.4 PILE CAPACITY REQUIREMENT IN TENSION



Take sum of moments about axis Ⓐ-Ⓑ

$$R_{TV}\, l_{st}\cos 30° - \frac{P l_{st}}{2}\cos 30° = M \qquad (6)$$

$$l_{st} = \frac{M}{\left(R_{TV} + \frac{P}{2}\right)\cos 30°} \qquad (7)$$



$$R_T = \frac{6}{\sqrt{37}} R_{TV} + \frac{1}{\sqrt{37}}\left(\frac{V}{3}\right)$$

$$R_{TV} = \frac{\sqrt{37}}{6} R_T - \frac{V}{18} \qquad (8)$$

Substituting Eq. (8) into Eq. (7)

$$\ell_{sd} = \frac{M}{\left(\frac{\sqrt{37}}{6} R_T - \frac{V}{18} + \frac{P}{3}\right)\cos 30^\circ} \qquad (9)$$

$M = 107{,}302$ ft-kips

$P = 450$ kips

$V = 1254.6$ kips $\qquad \frac{V}{18} = 69.7$

$$\ell_{sd} = \frac{123{,}902}{\frac{\sqrt{37}}{6} R_T + 80.3}$$

$R_T \geq 0 \qquad \ell_{max} = 1543.0$ ft

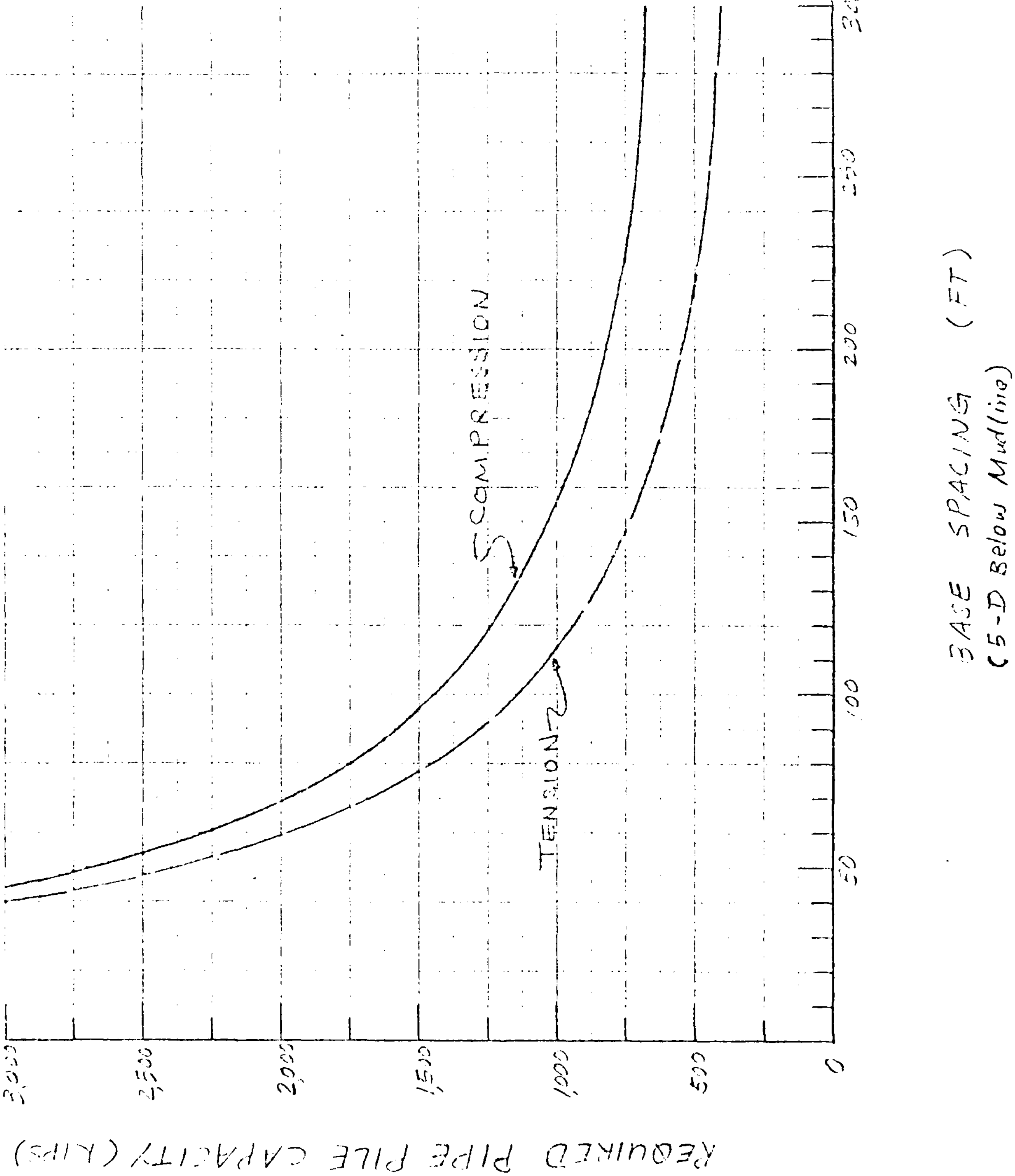
when $R_T = 0$

By [illegible] Check [illegible] Subject Structural Concept Analysis
Date [illegible] Job No. [illegible] Calculation Axial Pile Capacity Req't

R_T (kips)	$\frac{\sqrt{37}}{6}R_T + 80.2$	$C_d = \frac{123,902}{\frac{\sqrt{37}}{6}R_T + 80.2}$
0	80.2	1543.0
250	333.7	371.2
500	587.2	211.0
750	840.6	147.4
1,000	1,094.1	113.2
1,250	1,347.5	91.9
1,500	1,601.0	77.4
1,750	1,854.4	66.8
2,000	2,107.9	58.7
2,250	2,361.3	52.3
2,500	2,614.8	47.4
2,750	2,868.2	43.2
3,000	3,121.7	39.7

CREST OFFSHORE, INC.

Sheet 5-10 of 14



LOADINGS ON 3-PILE STRUCTURE (Revised)

Total Gravity Load $P_c = 620.8$, $P_T = 455.5$ kip

Base Shear $V = 886.9$ kip

Moment $M = 79,598$ ft-kip

Max Capacity

$$l = \frac{M}{\left(\frac{\sqrt{37}}{6} R_c - \frac{V}{18} - \frac{P_c}{3}\right) \cos 30^\circ}$$

$$= \frac{79,598}{\left(\frac{\sqrt{37}}{6} R_c - \frac{886.9}{18} - \frac{620.8}{3}\right) \cos 30^\circ} = \frac{91,859}{\frac{\sqrt{37}}{6} R_c - 256.2}$$

Max Tension

$$l = \frac{M}{\left(\frac{\sqrt{37}}{6} R_T - \frac{V}{18} - \frac{P_T}{3}\right) \cos 30^\circ}$$

$$= \frac{79,598}{\left(\frac{\sqrt{37}}{6} R_T - \frac{886.9}{18} + \frac{455.5}{3}\right) \cos 30^\circ}$$

$$= \frac{91,859}{\frac{\sqrt{37}}{6} R_T + 106.2}$$

CREST OFFSHORE, INC.

Sheet [illegible] of 14

By [illegible] Client [illegible] Subject [illegible]
Date [illegible] Job No. [illegible] Calculation [illegible]

$$\ell = \frac{91{,}889}{\frac{\sqrt{37}}{6} R_c - 256.2}$$

R_c	$\frac{\sqrt{37}}{6} R_c - 256.2$	$\ell = \frac{91{,}889}{\frac{\sqrt{37}}{6} R_c - 256.2}$
KIPS	KIPS	FT
252.7	0	∞
500.	250.7	366.5
750.	504.1	182.3
1,000.	757.6	121.3
1,250.	1,011.0	90.9
1,500.	1,264.5	72.7
1,750.	1,517.9	60.5
2,000.	1,771.4	51.9
2,250.	2,024.8	45.4
2,500.	2,278.3	40.3
2,750.	2,531.7	36.3
3,000.	2,785.2	33.0

Client ____ Subject ____
Date ____ Job No ____ Calculation ____

$$\ell = \frac{91{,}889}{\frac{\sqrt{37}}{6} R_T + 106.2}$$

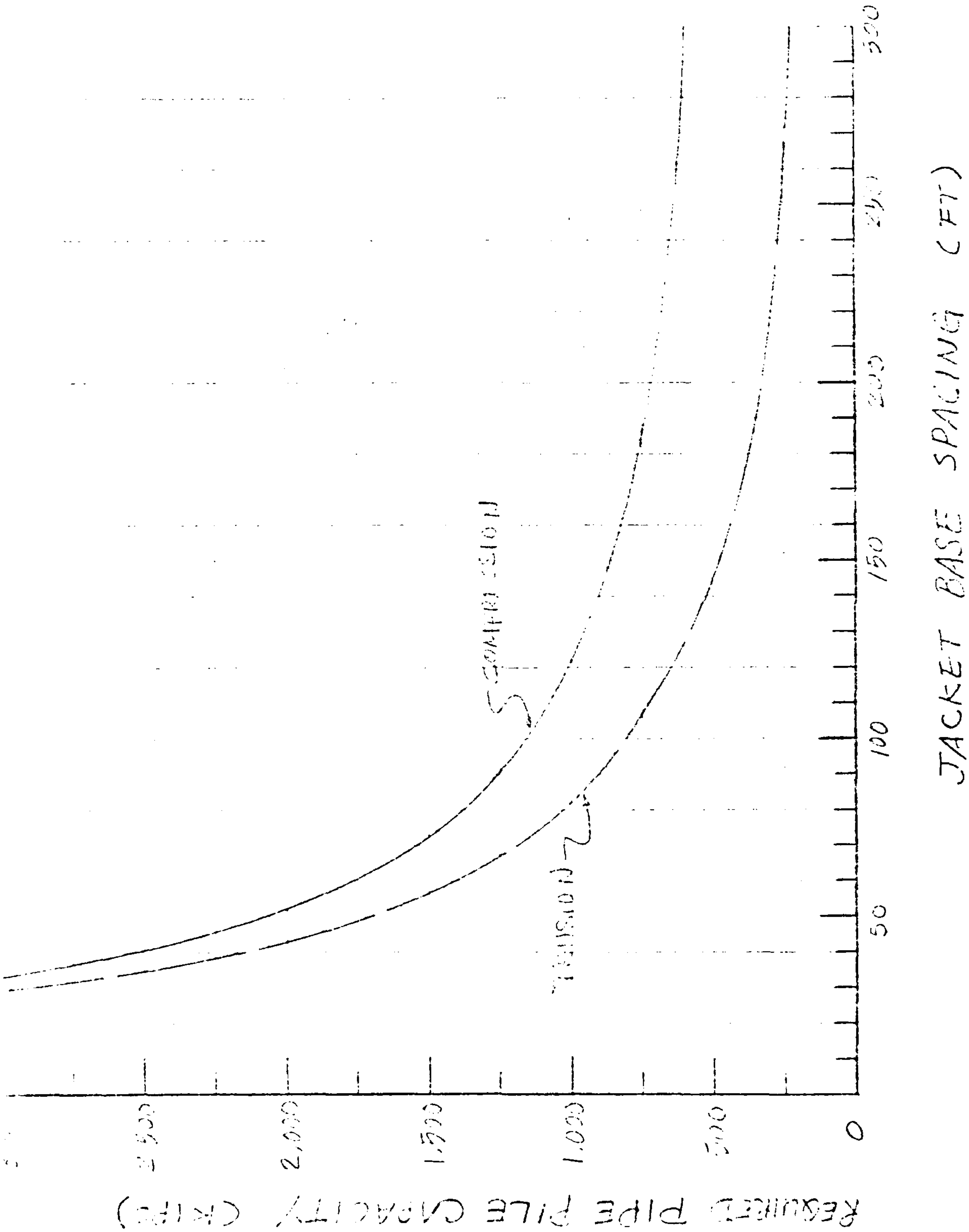
R_T	$\frac{\sqrt{37}}{6} R_T + 106.2$	$\ell = \frac{91{,}889}{\frac{\sqrt{37}}{6} R_T + 106.2}$
KIPS	KIPS	FT
0	106.2	865.2
250	359.6	255.5
500	613.1	149.9
750	866.5	106.0
1,000	1,120.0	82.0
1,250	1,373.4	66.9
1,500	1,626.9	56.5
1,750	1,880.3	48.9
2,000	2,133.8	43.1
2,250	2,387.2	38.5
2,500	2,640.7	34.8
2,750	2,894.1	31.8
3,000	3,147.6	29.2

CREST OFFSHORE, INC.

Sheet 5.1 of 14

By ______ Client ______ Subject ______

Date ______ Job No ______ Calculation ______



SECTION 6

STRUCTURAL STEEL WEIGHT VARIATION

6.1 INTRODUCTION

Set forth herein is the computations of the structural steel weights, respectively, for the piling sizes of 36", 39" and 42".

In the process of computations, the following member sizes of the structural components were assumed to be common regardless of varying piling diameters.

(1) Bracings

(2) Jacket Leg wall thickness

(3) Superstructures

(4) Miscellaneous items such as boat landing, stairway, etc.

6.2 PLAN AND ELEVATION

i) Plan View of Jacket

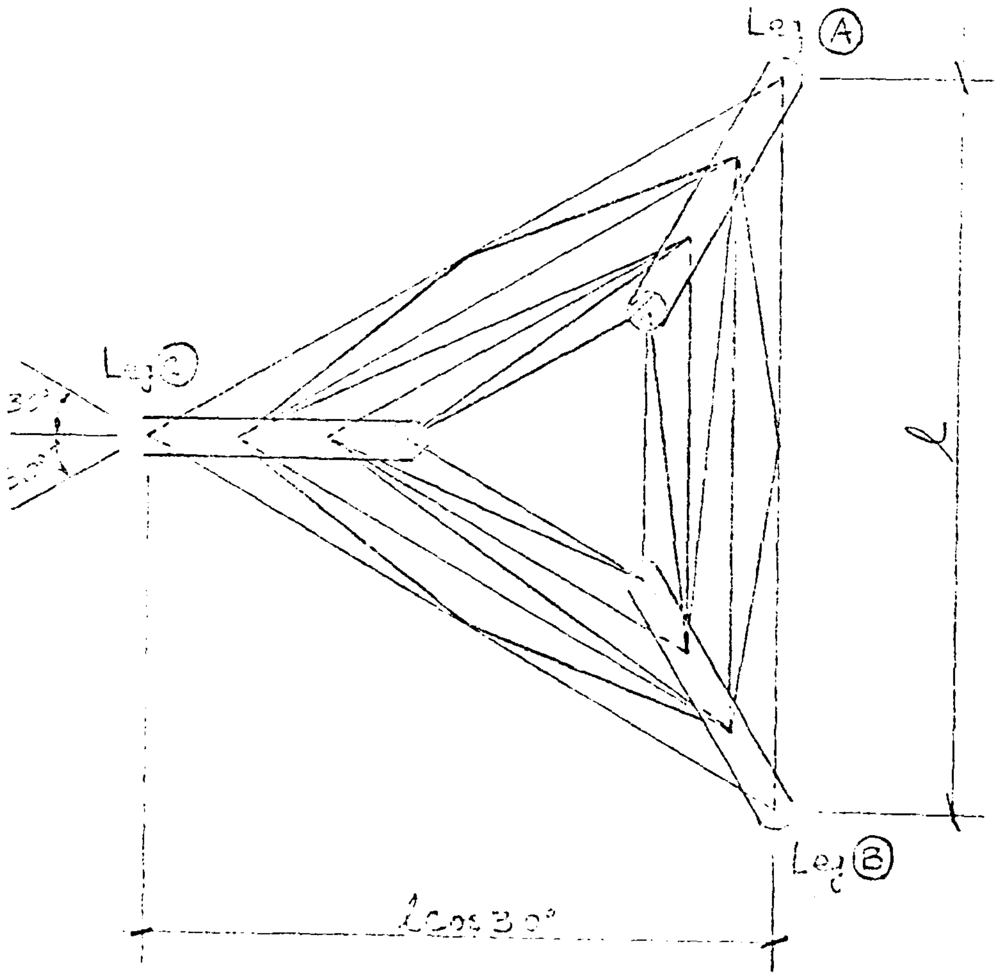
Member Sizes:

(i) Bracing: See Pg. 6.07

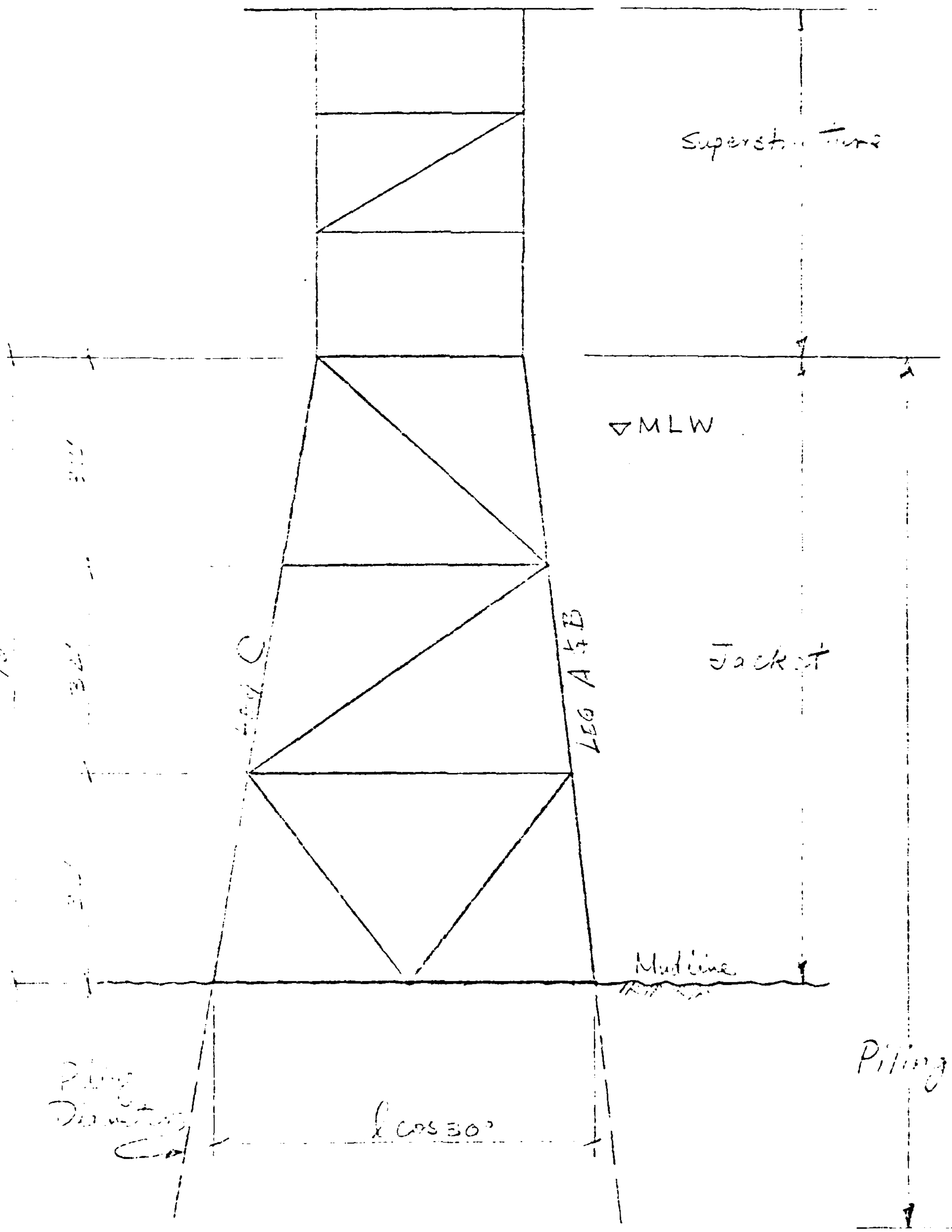
(ii) Leg: (D+4)" O.D. x .5" WT , See Pg. 6.09

(iii) Leg Joint Can: (D+5)" O.D. x 1" WT , See Pg. 6.09

* D = O.D. of Pipe Piles



(ii) Elevation of 3-Pile Structure



CREST OFFSHORE, INC.

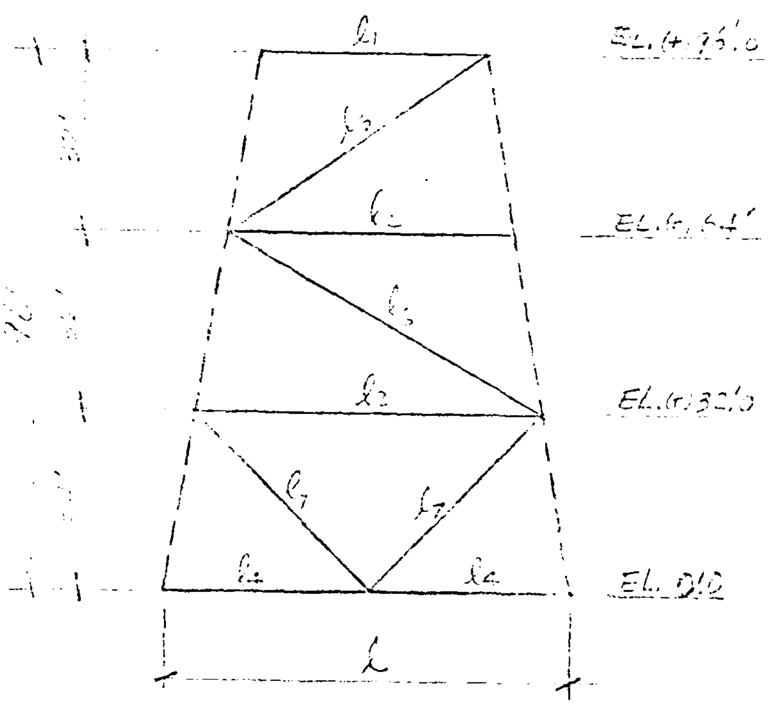
Sheet 6.24 of 77

By C.Chou Client U.S. NAVY Subject Structural Concept Analysis

Date 4-26-76 Job No 27-771-22 Calculation Structural Steel Weights

6.3 WEIGHT OF STRUCTURES

(1) Bracing (3 Req'd) referring to Plan View shown on P. 6.02



$$l_1 \cos 30° = l \cos 30° - \frac{96}{6}(1.5)$$

$$= l - 16(1.5)/\cos 30°$$

$$= l - 27.7 \quad (ft)$$

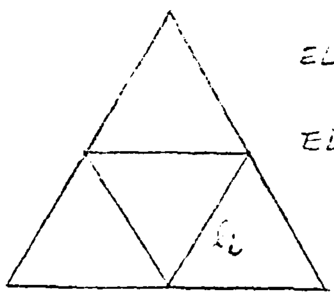
$$l_2 = (l - l_1) \times \frac{1}{3} + l_1$$

$$= \frac{1}{3} l + \frac{2}{3} l_1 = l - 18.46$$

$$l_3 = (l - l_1) \times \frac{2}{3} + l_1$$

$$= \frac{2}{3} l + \frac{1}{3} l_1 = l - 9.23$$

$$l_4 = \frac{1}{2} l$$



EL. 0'0 $l_i = l_8 = l_4$

EL. 32' $l_i = l_9 = \frac{1}{2} l_3$

EL. 64' $l_i = l_{10} = \frac{1}{2} l_2$

EL. 96' $l_i = l_{11} = \frac{1}{2} l_1$

$$l_5 = \sqrt{32^2 + [l_1 + \frac{1}{2}(l_2 - l_1)]^2}$$

$$= \sqrt{1024 + .25(l_1 + l_2)^2}$$

$$= \sqrt{1024 + .25(l - 9.23)^2}$$

$$l_6 = \sqrt{32^2 + [l_2 + \frac{1}{2}(l_3 - l_2)]^2}$$

$$= \sqrt{1024 + .25(l_2 + l_3)^2}$$

$$= \sqrt{1024 + .25(2l - 27.7)^2}$$

$$= \sqrt{1024 + (l - 13.85)^2}$$

$$\ell_7 = \sqrt{32^2 + \left(\tfrac{1}{2}\ell_3\right)^2}$$

$$= \sqrt{1024 + \frac{.25}{9}(\ell + \ell - 27.7)^2}$$

$$= \sqrt{1024 + \frac{1}{9}(\ell - 13.85)^2}$$

$$\ell_5 = \ell_6 = \tfrac{1}{2}\ell$$

$$\ell_9 = \tfrac{1}{2}\ell_3 = \tfrac{1}{2}\ell - 4.61$$

$$\ell_{10} = \tfrac{1}{2}\ell_2 = \tfrac{1}{2}\ell - 9.23$$

$$\ell_{11} = \tfrac{1}{2}\ell_1 = \tfrac{1}{2}\ell - 13.85$$

Total Length $L = \ell_1 + \ell_2 + \ell_3 + 2\ell_4 + \ell_5 + \ell_6 + 2\ell_7$

$$+ 3\ell_5^* + 3\ell_9^* + 3\ell_{10}^* + 3\ell_{11}^*$$

$$= (\ell - 27.7) + (\ell - 18.46) + (\ell - 9.23) + 2\left(\tfrac{1}{2}\ell\right)$$

$$+ \sqrt{1024 + .25(\ell - 9.23)^2} + \sqrt{1024 + (\ell - 13.85)^2}$$

$$+ 2\sqrt{1024 + .111(\ell - 13.85)^2} + 1.5\ell + (1.5\ell - 13.83)$$

$$+ (1.5\ell - 27.7) + (1.5\ell - 41.55)$$

$$= (10\ell - 138.47) + \sqrt{1024 + .25(\ell - 9.23)^2}$$

$$+ \sqrt{1024 + (\ell - 13.85)^2}$$

$$+ \sqrt{1024 + .11(\ell - 13.85)^2}$$

* Values increased to take into account the weight of anodes or extra thickness for corrosion protection.

ℓ BASE SPACING (FT)	$10\ell - 138.47$ (FT)	$\sqrt{1024+.25(\ell-9.23)^2}$ (FT)	$\sqrt{1024+(\ell-13.85)^2}$ (FT)	$\sqrt{1024+.11(\ell-13.85)^2}$ (FT)	L TOTAL BAR LENGTH (FT)
50	361.53	37.94	48.23	34.17	481.52
55	411.53	37.34	52.13	34.79	537.79
60	461.53	40.85	56.16	35.47	591.01
65	511.53	4[illegible].44	60.33	36.22	650.52
70	561.53	41.13	64.63	37.02	707.91
75	611.53	45.88	69.02	37.83	764.31
80	661.53	47.71	73.48	38.50	821.52
85	711.53	49.59	78.01	39.76	878.89
90	761.53	51.53	82.60	40.77	[illegible]

CREST OFFSHORE, INC.

Sheet 6.07 of 21

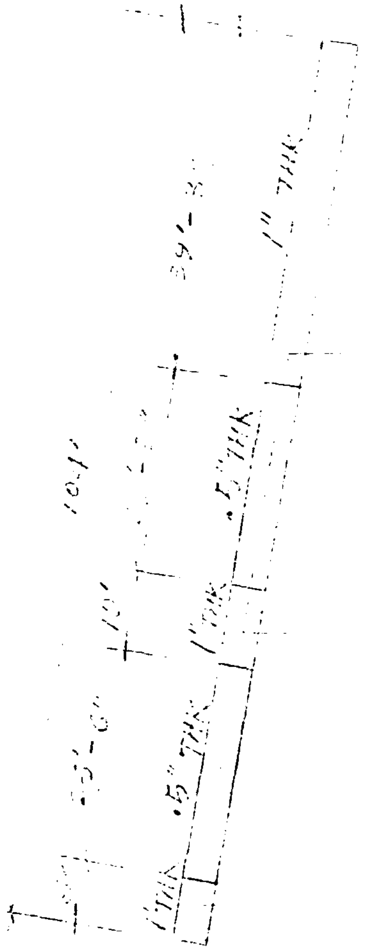
By C. Chen [illegible] Client NAVY Subject Structural Concept Analysis
Date 4-24-76 Job No 27-7715-92 Calculation [illegible]

BASE SPACING (FT)	BRACE MEMBER SIZE	TOTAL BRACE MEMBER LENGTH (FT)	UNIT WEIGHT (LBS/FT)	TOTAL WEIGHT (LBS)
50	18"Φ x .5" WT	481.92	93.45	45,035
55	"	537.79	"	50,256
60	"	594.01	"	55,510
65	20"Φ x .5" WT	650.52	104.13	67,739
70	"	707.31	"	73,652
75	"	764.31	"	79,588
80	22"Φ x .5" WT	821.52	114.81	94,319
85	"	878.89	"	100,905
90	"	936.43	"	107,512

CREST OFFSHORE, INC.

By C. Chen Client [illegible] Subject Structural Concept Analysis
Date [illegible] Job No. [illegible] Calculation Structural Steel Wt. Estimation

(i) Jacket Legs (3-Req'd)



Wall	1" THK	55'-3"
Wall	.5" THK	43'-9"

Pile O.D. (IN)	Jacket Size x Length	Jacket Unit Wt (LBS/FT)	Jacket Weight (LBS)	Leg Size x Length	Leg Unit Wt (LBS/FT)	Leg Weight (LBS)	Total Weight (LBS)
36	40"Φx.5"x48.75'	210.93	10,283	41"Φx1" x [illegible]	[illegible]	[illegible]	29,886
39	43"Φx.5"x48.75'	226.95	11,064	44"Φx1" x 55.25	459.[illegible]	25,374	36,438
42	46"Φx.5"x48.75'	242.97	11,845	47"Φx1" x [illegible]	491.[illegible]	[illegible],144	[illegible]

CREST OFFSHORE, INC.

By [illegible] Client [illegible] Subject [illegible]
Date [illegible] Job No. [illegible] Calculation [illegible]

Pilings (3 - Reqd)

	36" O.D.	39" O.D.	42" O.D.
	433.92 x 40 = 13,357#	503.97 x 40 = 20,159#	544.02 x 40 = 21,761#
	640.17 x 50 = 32,007#	696.21 x 50 = 34,811#	752.28 x 50 = 37,614#
	32,007#	34,811#	37,614#
	552.70 x 50 = 27,635#	600.76 x 50 = 30,038#	648.82 x 50 = 32,441#
	27,635#	30,038#	32,441#
	552.7(ΔH)	600.76(ΔH)	648.82(ΔH)
TOTAL	137,841 + 552.7ΔH	149,857 + 600.76(ΔH)	161,371 + 648.82(ΔH)

CREST OFFSHORE, INC.

Sheet 6.11 of 27

By [illegible] Client U.S. NAVY Subject [illegible]
Date 4-7-82 Job No [illegible] Calculation [illegible]

36-in. Diameter Pipe Piles

Base Spacing		Read Pile Capacity		Read Pile Penetration	Pile [illegible] P-1	
ℓ	ℓ_{st}	Compression	Tension		ΔH	552.7(ΔH)
FT	FT	KIPS	KIPS	FT	FT	LBS
50	54.33	2,450	2,150	242.5	122.5	67,706
55	59.33	2,300	2,000	230.0	110.0	60,797
60	[illegible]4.33	2,125	1,825	217.5	97.5	53,888
65	[illegible]	2,000	1,700	207.5	87.5	48,361
[illegible]	74.33	1,875	1,600	192.5*	72.5	40,071
[illegible]	[illegible]9.33	1,750	1,450	182.5*	62.5	34,5~~44~~
[illegible]	84.33	1,650	1,350	170.0*	50.0	27,635
[illegible]	89.33	1,575	1,275	162.5*	42.5	23,490
90	[illegible]	[illegible]	1,200	157.5*	37.5	20,726

Note: ℓ = base spacing at mud line

ℓ_{st} = base spacing at 3-D below mud line

($\ell_{st} = \ell + 4.33$ ft)

ΔH = pile segment length shown on Pg. 6.10

(ΔH = Read Penetration − 120 ft)

* denotes tension control

By [illegible] Client [illegible] Subject [illegible] Concept Analysis
Date [illegible] Job No. [illegible] Calculation [illegible]

3?-in. Diameter Pipe Pile

Base Spacing		Req'd Pile Capacity		Req'd Pile	Pile Segment P-1	
ℓ	ℓ_{sd}	Compression	Tension	Penetration	ΔH	600.76(ΔH)
FT	FT	KIPS	KIPS	FT	FT	LBS
50	54.69	2,400	2,150	227.5	107.5	64,582
55	59.69	2,300	2,000	217.5	97.5	58,574
60	64.69	2,12[illegible]	1,825	[illegible].0*	85.0	51,065
65	69.69	2,000	1,700	192.5*	72.5	43,555
70	74.69	1,875	1,550	177.5*	57.5	34,544
75	79.69	1,750	1,450	170.0*	50.0	30,038
80	84.69	1,550	1,350	160.0*	40.0	24,030
85	89.69	1,575	1,275	155.0*	35.0	21,027
90	94.69	1,500	1,200	147.5*	27.5	16,521

Note: ℓ = base spacing at mudline

ℓ_{sd} = base spacing at 5-D below mudline
($\ell_{sd} = \ell + 4.69$ ft)

ΔH = Pile segmental length shown on Fig. 6-10
(ΔH = Req'd Penetration − 120 ft)

* denotes tension control

CREST OFFSHORE, INC.

By [illegible] Client [illegible] Subject [illegible]
Date [illegible] Job No [illegible] Calculation [illegible]

42-in. Diameter Pipe Piles

Base Spacing		Req'd Pile Capacity		Req'd Pile	Pile Segment P-1	
l	l_{5d}	Compression	Tension	Penetration	ΔH	648.82(ΔH)
FT	FT	KIPS	KIPS	FT	FT	LBS
50	55.05	2,450	2,150	217.5*	97.5	63,260
55	60.05	2,300	2,000	207.5*	87.5	56,772
60	65.05	2,125	1,825	192.5*	72.5	47,039
65	70.05	2,000	1,700	182.5*	62.5	40,551
70	75.05	1,875	1,550	170.0*	50.0	32,441
75	80.05	1,750	1,450	162.5*	42.5	27,575
80	85.05	1,650	1,350	152.5*	32.5	21,087
85	90.05	1,575	1,275	147.5*	27.5	17,843
90	95.05	1,500	1,200	142.5*	22.5	14,598

Notes: l = base spacing at mudline

l_{5d} = base spacing at 5-D below mudline
($l_{5d} = l + 5.05$ ft)

ΔH = Pile segment 1 length shown on Pg. 6.10
(ΔH = Req'd Penetration − 120 ft)

* denotes tension control

CREST OFFSHORE, INC.

Sheet 6.14 of 27

By [illegible] Client [illegible] Subject [illegible]

Date [illegible] Job No. [illegible] Calculation [illegible]

Piling Weight

(Ref. to Pg. 6.10)

Pile Spacing at Mid-Line	Piling Weight		
	36" O.D.	39" O.D.	42" O.D.
FT	LBS	LBS	LBS
50	205,547	214,439	225,131
55	193,635	208,431	216,643
60	191,729	200,922	208,910
65	185,202	193,412	202,422
70	177,912	184,401	194,312
75	172,383	179,895	189,446
[illegible]	166,476	173,887	182,958
[illegible]	161,391	170,884	179,714
90	158,337	166,378	176,460

(iv) TOTAL WEIGHT OF STRUCTURE

$$W_T = W_P + W_J + W_S + W_M \quad\quad (1)$$

where W_T = Total Weight of Structure

W_P = Weight of Piling

W_J = Weight of Jacket

W_S = Weight of Superstructure

W_M = Weight of Miscellaneous Items, such as boat landing, walkway, etc.

Assuming that the superstructure and the miscellaneous items can be designed in the same amount of steel weight regardless of the change of jacket base spacing, i.e.,

$$W_S + W_M = \text{Constant} \quad\quad (2)$$

Subtracting Eq. (2) from both sides of Eq. (1), it gives

$$W = W_P + W_J \quad\quad (3)$$

where W = weight of piling and jacket

CREST OFFSHORE, INC.

Sheet 6.16 [illegible]

By [illegible] Client U.S. NAVY Subject [illegible]
Date [illegible] Job No. [illegible] Calculation [illegible]

One-third weight of W (Eq. 8) is [illegible] to the sum the weights shown in Pages 6.07, 6.09 and 6.14.

[illegible]-IN. DIAMETER PILING

BASE SPACING AT MUDLINE	WEIGHT			
	JACKET		PILING	TOTAL
	LEG	BRACES		
FT	LBS	LBS	LBS	LBS
50	[illegible]	45,035	[illegible],547	284,465
55	"	50,256	198,633	282,730
60	"	55,510	191,729	[illegible],125
65	"	67,739	[illegible]	237,807
70	"	73,652	177,[illegible]2	[illegible]
75	"	[illegible],582	172,[illegible]	285,[illegible]
80	"	94,519	[illegible]	293,681
85	"	100,905	161,331	296,122
90	"	107,512	158,[illegible]67	299,965

CREST OFFSHORE, INC.

Sheet 6-17 of [illegible]

By [illegible] Client U.S. NAVY Subject Structural Concept Analysis
Date [illegible] Job No. 27-771-[illegible] Calculation Structural Steel Wt Variation

[illegible]-IN. DIAMETER PILING

BASE SPAC'G AT MUDLINE	WEIGHT			
	JACKET		PILING	TOTAL
	LEG	BRACES		
FT	LBS	LBS	LBS	LBS
50	[illegible]	45,035	214,439	295,9[illegible]2
55	"	50,256	20[illegible],431	295,125
60	"	55,510	20[illegible],922	292,870
65	"	67,739	193,410	297,959
70	"	73,652	184,491	294,491
75	"	79,588	179,[illegible]	295,921
80	"	94,319	173,337	304,6~~44~~
85		100,905	170,[illegible]	308,227
90	"	107,512	[illegible]	310,528

[illegible]2 - IN. DIAMETER PILING

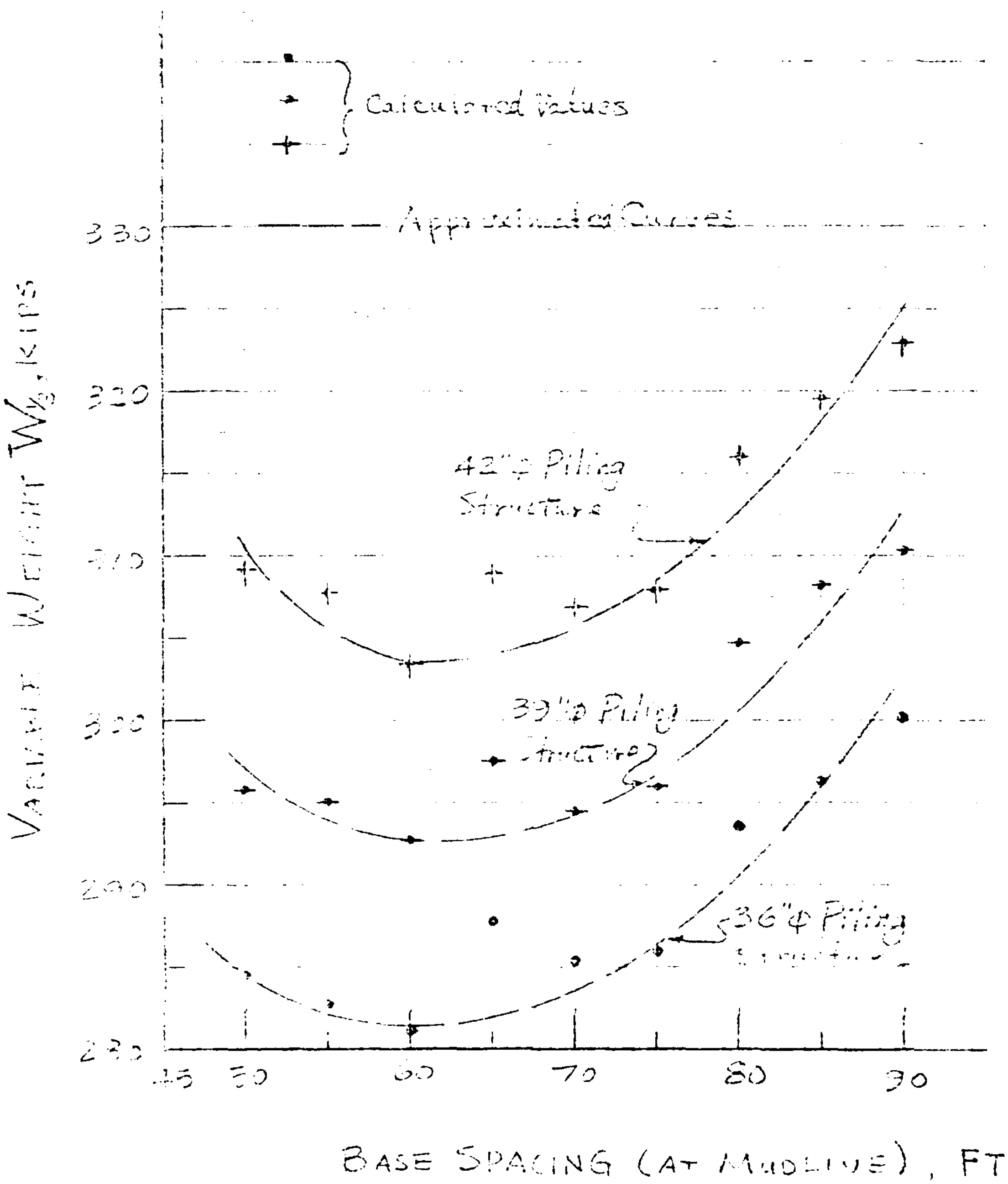
BASE SPAC'G AT MUDLINE	WEIGHT			
	JACKET		PILING	TOTAL
	LEG	BRACES		
FT	LBS	LBS	LBS	LBS
50	[illegible]	45,035	[illegible] 131	309,155
55		50,256	215,643	307,888
60	"	55,510	203,910	303,409
65		67,739	[illegible]	309,160
70		73,652	1[illegible]4,312	3[illegible]6,953
75		[illegible]9,588	18[illegible],446	303,003
80	"	94,319	[illegible]	316,266
85	"	100,905	[illegible]	[illegible]
90	"	107,512	[illegible]	322,961

CREST OFFSHORE, INC.

Sheet [illegible]

By [illegible] Client U.S. NAVY Subject [illegible]

Date [illegible] Job No [illegible] Calculation [illegible]



CREST OFFSHORE, INC.

Sheet 6.12 of 37

By [illegible] Client [illegible] Subject Structural Concept/Anchoring Pile
Date [illegible] Job No [illegible] Calculation Anchor & Steel Wt. Valuation

Revised in Accordance with Graph shown on Pg 5.14

36-IN. Diameter Pipe Piles

Base Grade	Req'd Pile Capacity		Req'd Pile Penetration	Pile Segment P-1	
	Compression	Tension		ΔH	552.7(ΔH)
FT	KIPS	KIPS	FT	FT	LBS
50	2,075	1,700	212.5	92.5	51,125
55	1,900	1,550	192.5*	72.5	40,071
60	1,750	1,400	175.0*	55.0	30,399
65	1,650	1,275	162.5*	42.5	23,490
70	1,550	1,175	155.0*	35.0	19,345
75	1,450	1,100	147.5*	27.5	15,199
80	1,375	1,025	140.0*	20.0	11,054
85	1,300	950	135.0*	15.0	8,291
90	1,250	900	132.5*	12.5	6,909

Notes: ΔH = (Req'd Penetration − 120 ft) Pg. 6.10

* denotes tension control

By C. Chern Client U.S. NAVY Subject Structural Concept Analysis (3-pile)
Date 5-10-76 Job No. 27-771-93 Calculation Structural Steel Wt. Variation

Revised in Accordance with Graph shown on Pg 5.14

39 - IN. Diameter Pipe Piles

BASE SPAC'G	REQ'D PILE CAPACITY		REQ'D PILE	PILE SEGMENT P-1	
	COMPRESSION	TENSION	PENETRATION	ΔH	600.76 (ΔH)
FT	KIPS	KIPS	FT	FT	LBS
50	2,075	1,700	192.5*	72.5	43,555.
55	1,900	1,550	177.5*	57.5	34,544.
60	1,750	1,400	165.0*	45.0	27,034.
65	1,650	1,275	155.0*	35.0	21,027.
70	1,550	1,175	145.0*	25.0	15,019.
75	1,450	1,100	140.0*	20.0	12,015.
80	1,375	1,025	135.0*	15.0	9,011.
85	1,300	950	130.0*	10.0	6,008.
90	1,250	900	125.0*	5.0	3,004.

Notes: ΔH = (Req'd Penetration - 120 ft) Pg. 6.10

* denotes tension control

CREST OFFSHORE, INC.

Sheet 6.32 of 47

By C. Chern Client U.S. NAVY Subject Structural Concept Analysis (3-pile)
Date 3-10-76 Job No 27-771-92 Calculation Structural Steel Wt. Variation

Revised in Accordance with Graph shown on Pg 5.14

42 - IN. Diameter Pipe Piles

Base Spac'g	Req'd Pile Capacity		Req'd Pile Penetration	Pile Segment P-1	
	Compression	Tension		ΔH	648.32(ΔH)
FT	KIPS	KIPS	FT	FT	LBS
50	2,075	1,700	182.5*	62.5	40,551.
55	1,900	1,550	167.5*	47.5	30,819.
60	1,750	1,400	157.5*	37.5	24,331.
65	1,650	1,275	147.5*	27.5	17,843.
70	1,550	1,175	140.0*	20.0	12,976.
75	1,450	1,100	135.0*	15.0	9,732.
80	1,375	1,025	130.0*	10.0	6,488.
85	1,300	950	125.0*	5.0	3,244.
90	1,250	900	120.0*	0	0.

Notes: ΔH = (Req'd Penetration - 120 ft) Pg. 6.10

* denotes tension control

By C. Chen Client U.S. NAVY Subject Structural Concept Analysis (Basic)
Date 5-10-7[illegible] Job No 27-771-92 Calculation [illegible]

Piling Weight (Revised)

(Refer to Pg. 6.10)

Base Spacing at Mud Line	Piling Weight		
	36" O.D.	39" O.D.	42" O.D.
FT	LBS	LBS	LBS
50	188,966	193,412	202,422
55	177,912	184,401	192,690
60	166,240	176,891	186,202
65	161,331	170,814	179,714
70	157,186	164,876	174,847
75	153,040	161,872	171,603
80	149,895	158,868	168,359
85	146,132	155,865	165,115
90	144,750	152,861	161,871

CREST OFFSHORE, INC.

Sheet 24 of 27

By [illegible] Client U.S. [illegible] Subject [illegible]
Date [illegible] Job No. [illegible] Calculation [illegible]

W/3

36-in. Diameter Piling

Base Spacing At Mud Line	Weight			
	Jacket		Piling	Total
	Leg	Braces		
FT	LBS	LBS	LBS	LBS
50	33,886	4[illegible],055	182,966	267,837
55	"	50,256	177,912	262,054
60	"	55,510	168,240	257,636
65	"	67,739	161,331	262,956
70	"	73,652	157,186	264,724
75	"	79,[illegible]	153,040	266,514
80	"	94,319	143,895	277,100
85	"	100,905	146,132	280,923
90	"	107,512	144,750	283,143

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Sheet 6-22 of 27

By C. Chen Client U.S. NAVY Subject Structural Concept Analysis (3-pile)
Date 5-10-76 Job No 7771-96 Calculation Structural Steel Wt. Variation

W⅓

[illegible] IN. DIAMETER PILING

BASE SPACE AT MUD LINE	WEIGHT			
	JACKET		PILING	TOTAL
	LEG	BRACES		
FT	LBS	LBS	LBS	LBS
50	36,438	45,035	193,412	274,885
55	"	50,256	184,401	271,095
60	"	55,510	176,891	268,839
65	"	67,739	170,884	275,061
70	"	73,652	164,876	274,966
75	"	79,588	161,872	277,898
80	"	94,319	158,868	289,625
85	"	100,905	155,865	293,208
90	"	107,512	152,861	296,811

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Sheet 6-2-6 of 27

By C. Chen Client U.S. Navy Subject Structural Concept Analysis (3-pile)
Date 5-10-76 Job No [illegible] Calculation Structural Steel Wt. Variation

W⅓

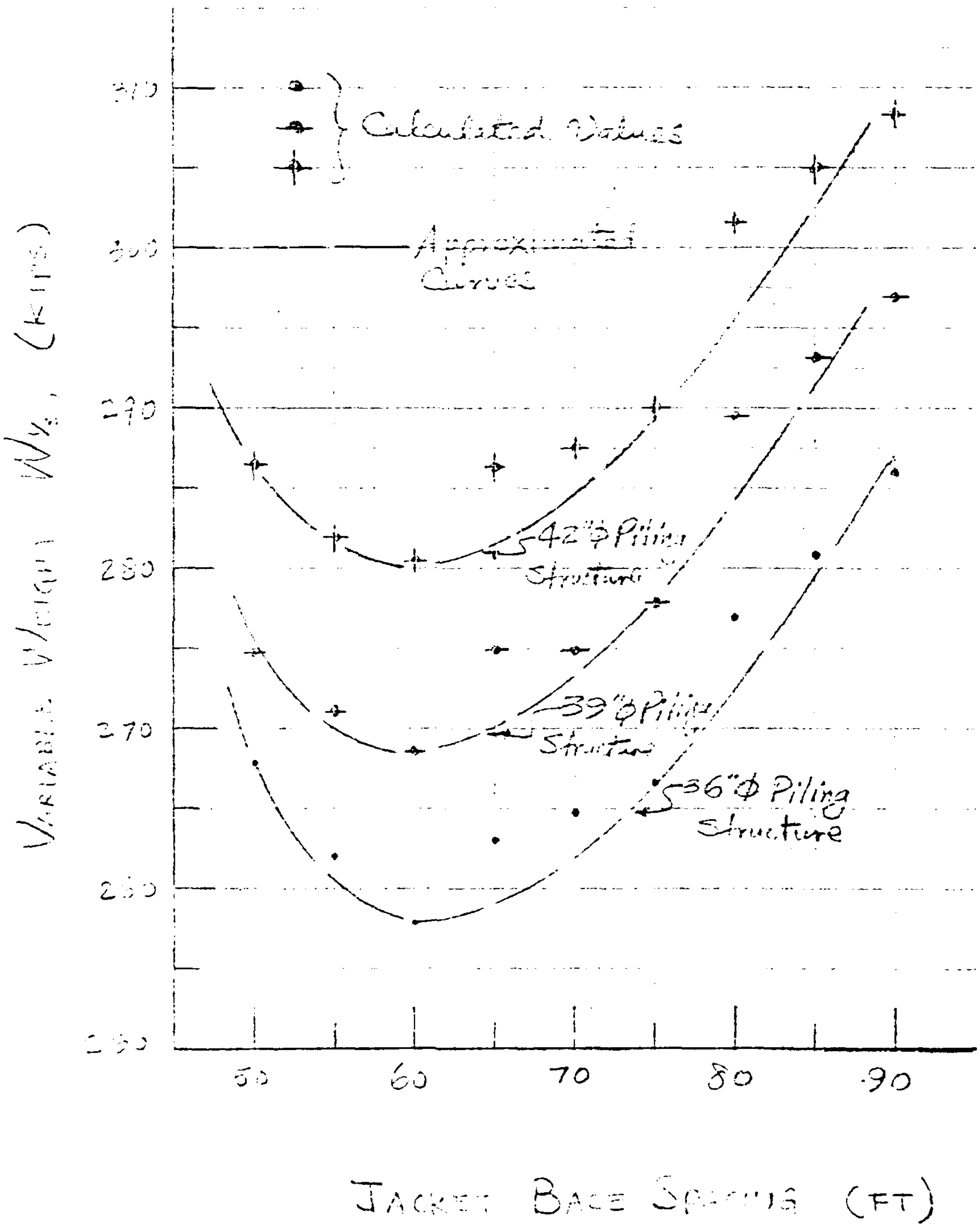
42-in. Diameter Piling

Base Spacing At Mud Line	WEIGHT			
	JACKET		PILING	TOTAL
	LEG	BRACES		
FT	LBS	LBS	LBS	LBS
50	38,989	45,035	202,422	286,446
55	"	50,256	192,690	281,935
60	"	55,510	186,202	280,701
65	"	67,739	179,714	286,442
70	"	73,652	174,847	287,488
75	"	79,588	171,603	290,180
80	"	94,319	168,359	301,667
85	"	100,905	165,115	305,009
90	"	107,512	161,871	308,372

CREST OFFSHORE, INC.

Sheet 6-27 of

By [illegible] Client [illegible] Subject [illegible]
Date [illegible] Job No [illegible] Calculation [illegible]



SECTION 7

STRUCTURAL CONFIGURATION

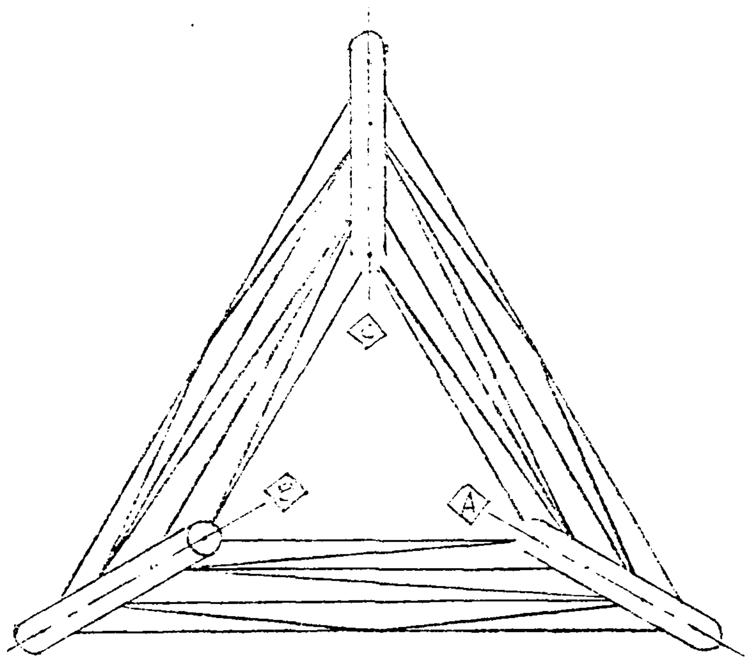
7.1 INTRODUCTION

Set forth herein is the conceptial configuration for the three-pile structure. This configuration was selected primarily on the basis of weight optimization as presented previously.

6.2 PLANS AND ELEVATIONS

KEY PLAN

SCALE : 1/16" = 1'-0"



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Sheet 7.04 of 16

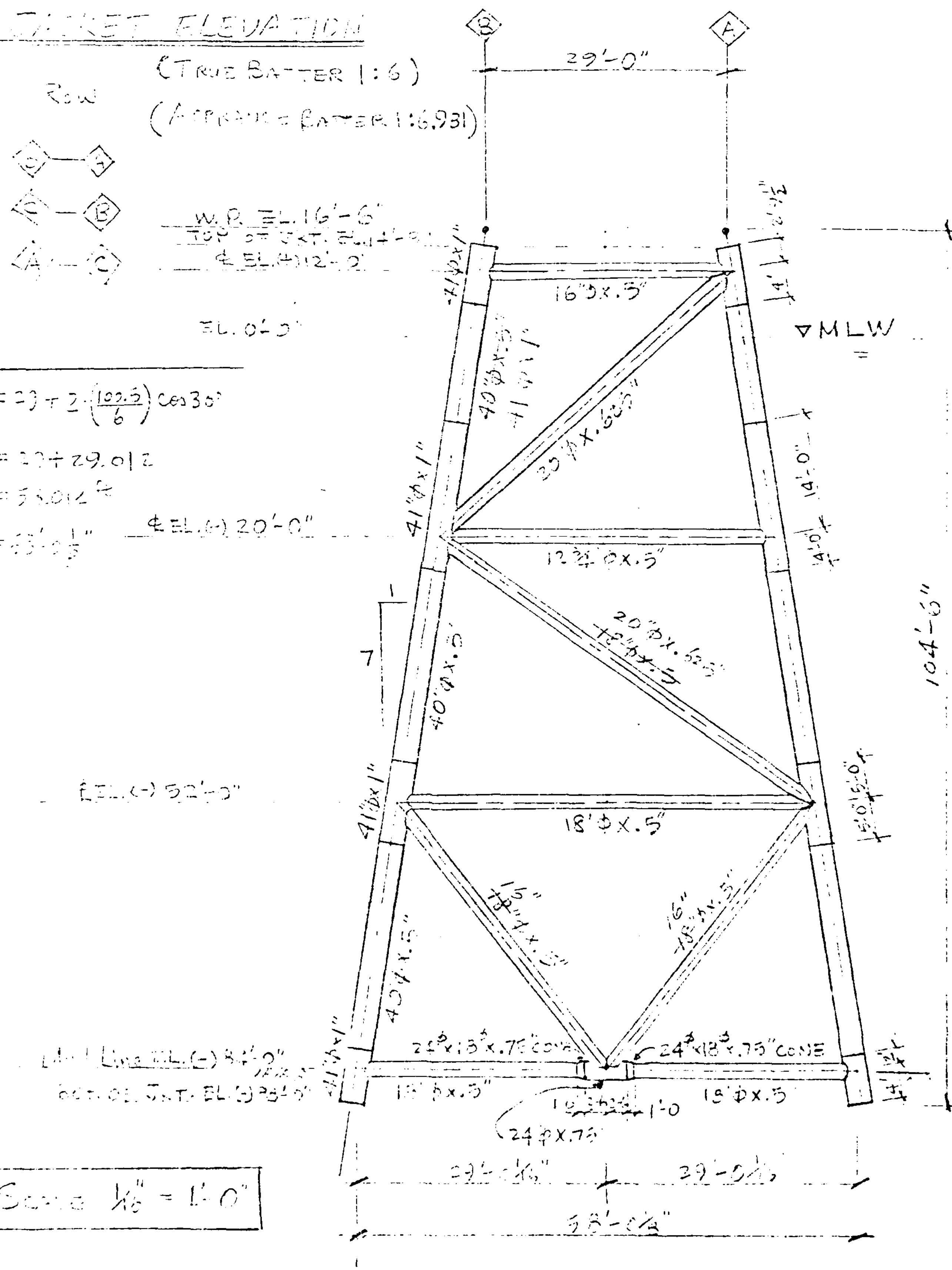
By C. Chen Client U.S. NAVY Subject Structural Concept Analysis
Date Job No. Calculation Structural Configuration

JACKET ELEVATION

(TRUE BATTER 1:6)

(APPARENT BATTER 1:6.931)

Row



$$x = 29 + 2\cdot\left(\frac{102.5}{6}\right)\cos 30°$$

$= 29 + 29.012$

$= 58.012'$

$= 58'-0\frac{1}{8}"$

Scale 1/8" = 1'-0"

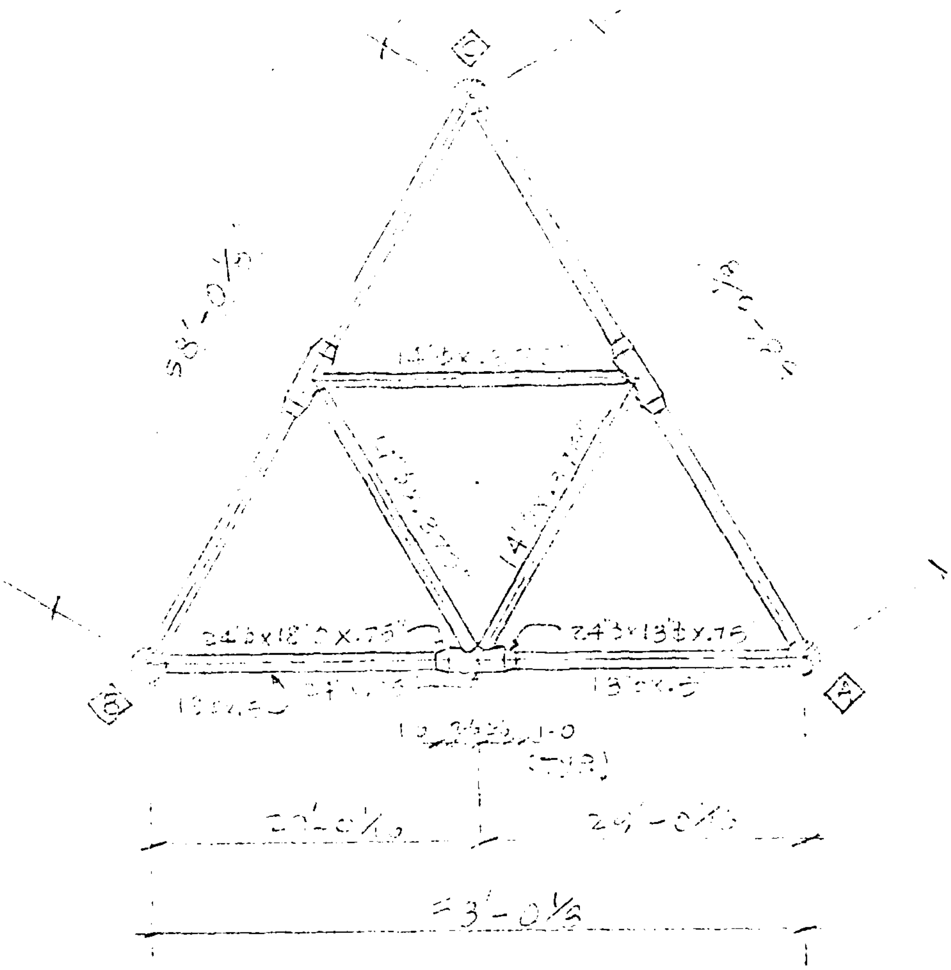
CREST OFFSHORE, INC.

By ______ Client: U.S. NAVY ______ Subject: ______ Concept Analysis

Date ______ Job No. ______ Calculation: Structural Configuration

PLAN @ EL. (+) 34'-0"

Scale 1/16" = 1'-0



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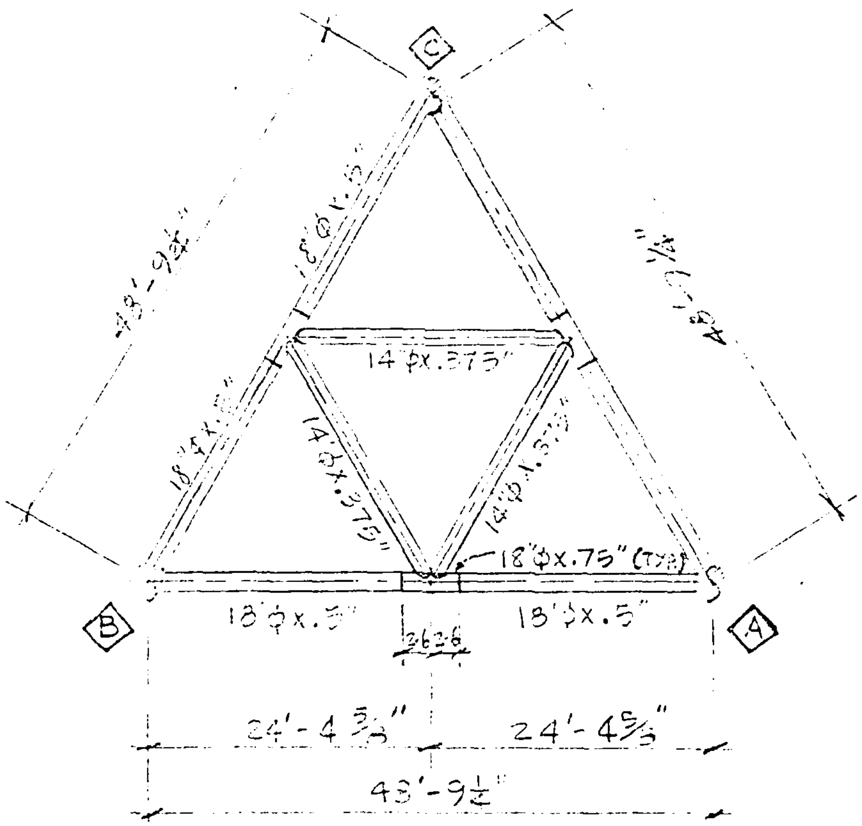
Sheet Z-26 of [illegible]

By [illegible] Client U.S. NAVY Subject Structural Concept Analysis [illegible]
Date [illegible] Job No [illegible] Calculation Structural Configuration

PLAN @ EL. (-) 52'-0"

SCALE [illegible] = [illegible]



$$* \; l = 29 + 2 \cdot \left(\frac{63.5}{6}\right) \cos 30^\circ$$

$$= 29 + 19.7748$$

$$= 48'\text{-}9\tfrac{1}{4}"$$

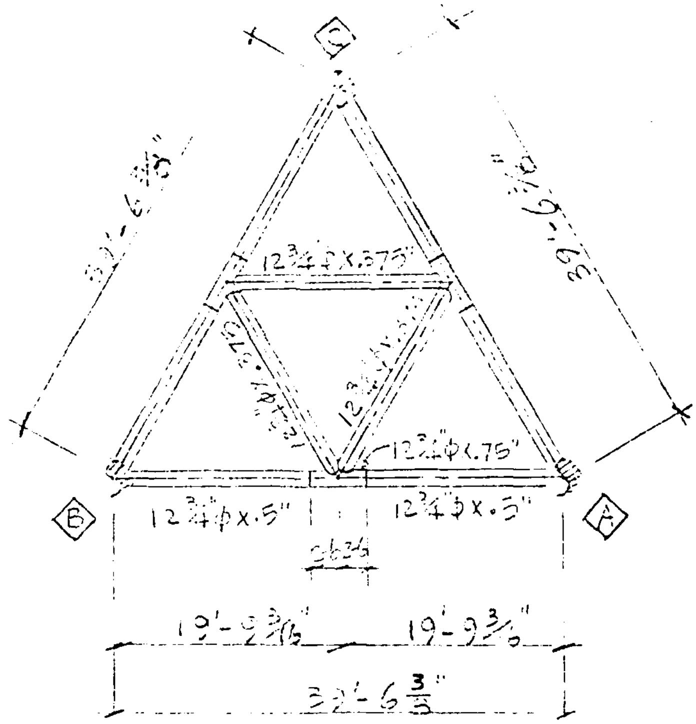
CREST OFFSHORE, INC.

Sheet [illegible] of [illegible]

By [illegible] Client U.S. Navy Subject [illegible]
Date 4-6-76 Job No. [illegible] Calculation [illegible]

PLAN @ EL.(+) 30'-0"

SCALE 1/16" = 1'-0"



* $l = 29 + 2\left(\frac{32.0}{6}\right)\cos 30°$

$= 29 + 10.53$

$= 39'-6\frac{3}{8}"$

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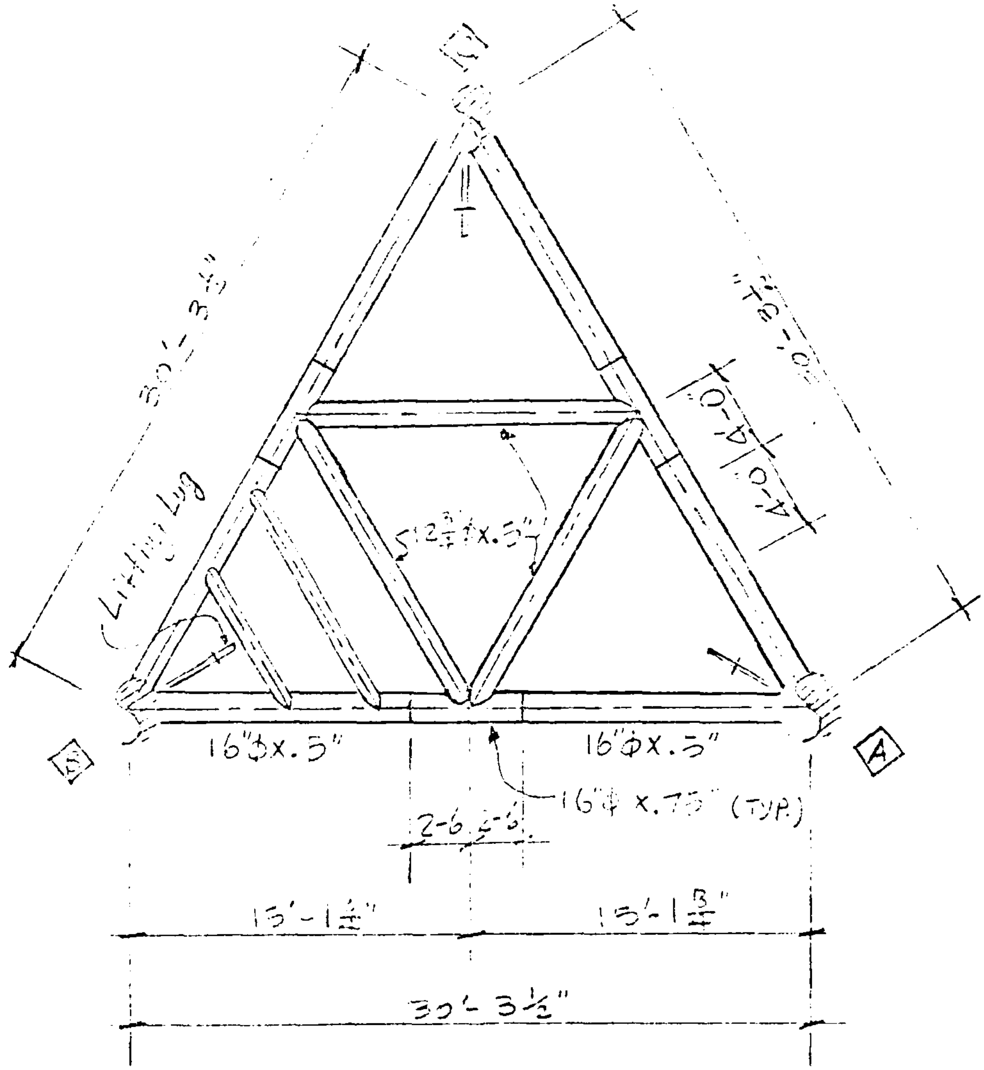
Sheet [illegible] of [illegible]

By [illegible] Client [illegible] Subject [illegible]

Date [illegible] Job No [illegible] Calculation [illegible]

PLAN @ EL.(+)12-0' (TOP OF ALL PIPE EL.(+)12'-5")

SCALE 1/4" = 1'-0"



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* [illegible] = 29 + 2 ([illegible]) Cos 30°

= [illegible] + 1.3

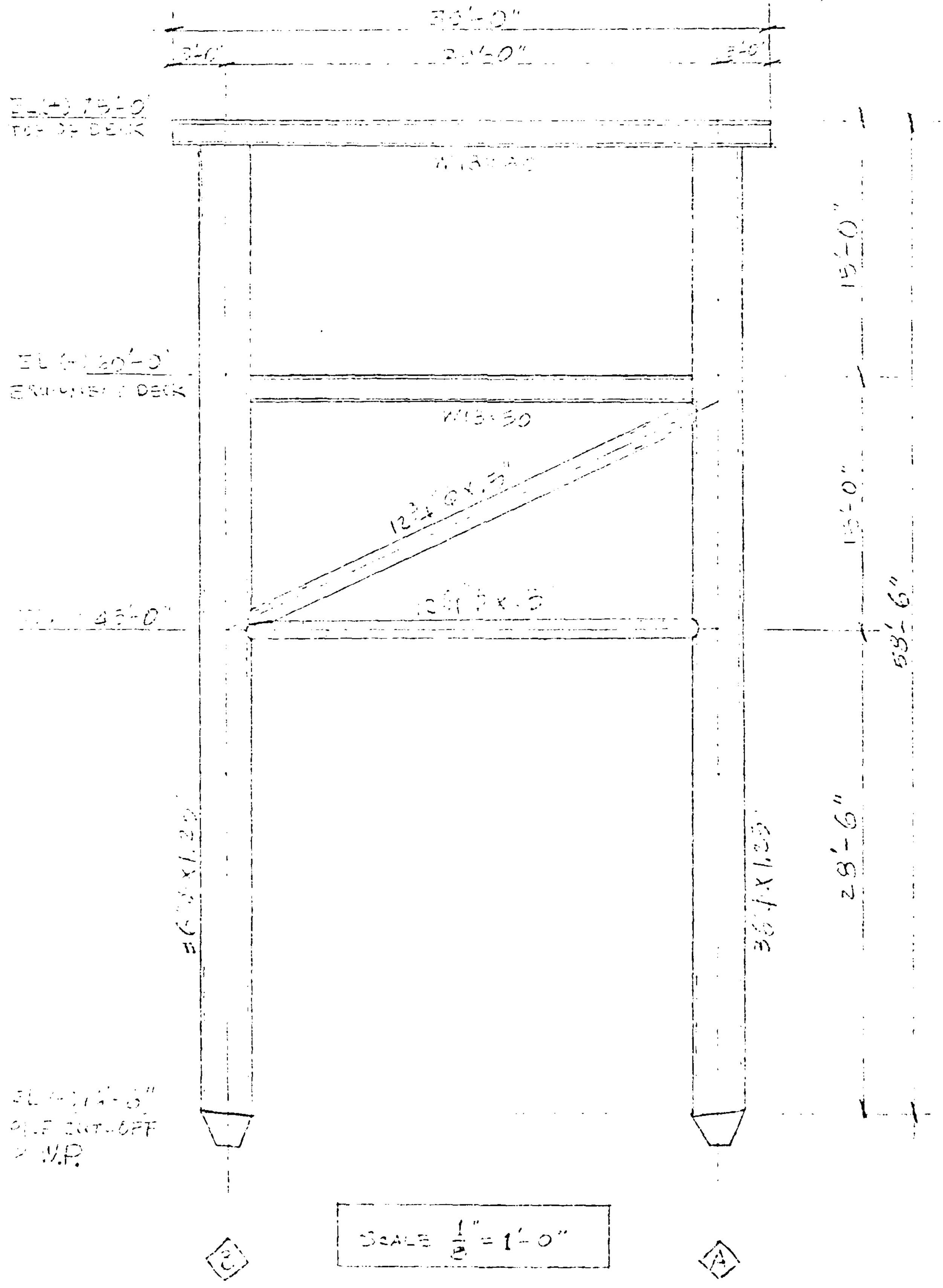
= [illegible]

CREST OFFSHORE, INC.

Sheet Z of 15

By Chkd Subject

Date Job No. Calculation

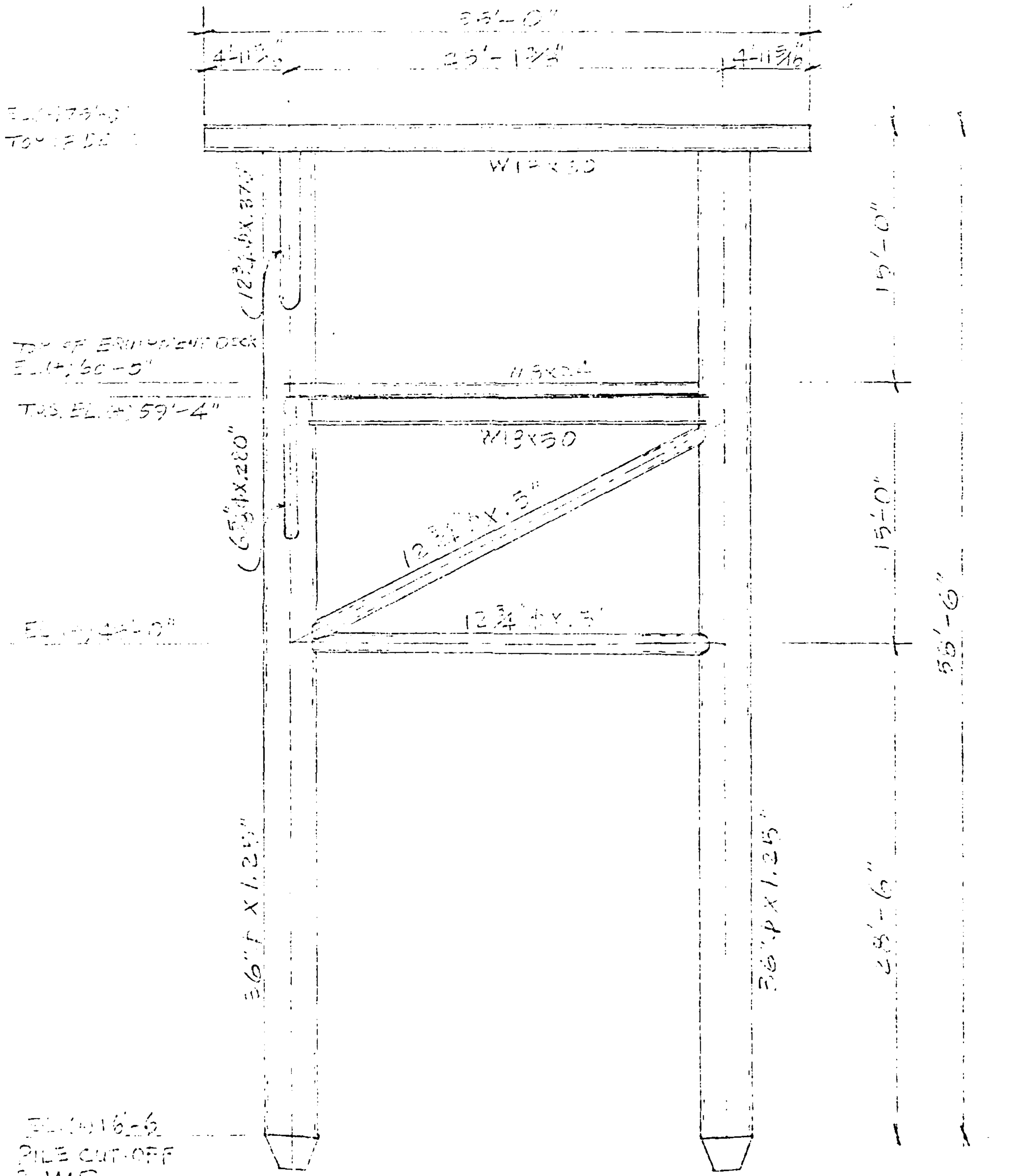


CREST OFFSHORE, INC.

Sheet 7.12 of 15

By [illegible] Client U.S. NAVY Subject [illegible]

Date [illegible] Job No. [illegible] Calculation [illegible]

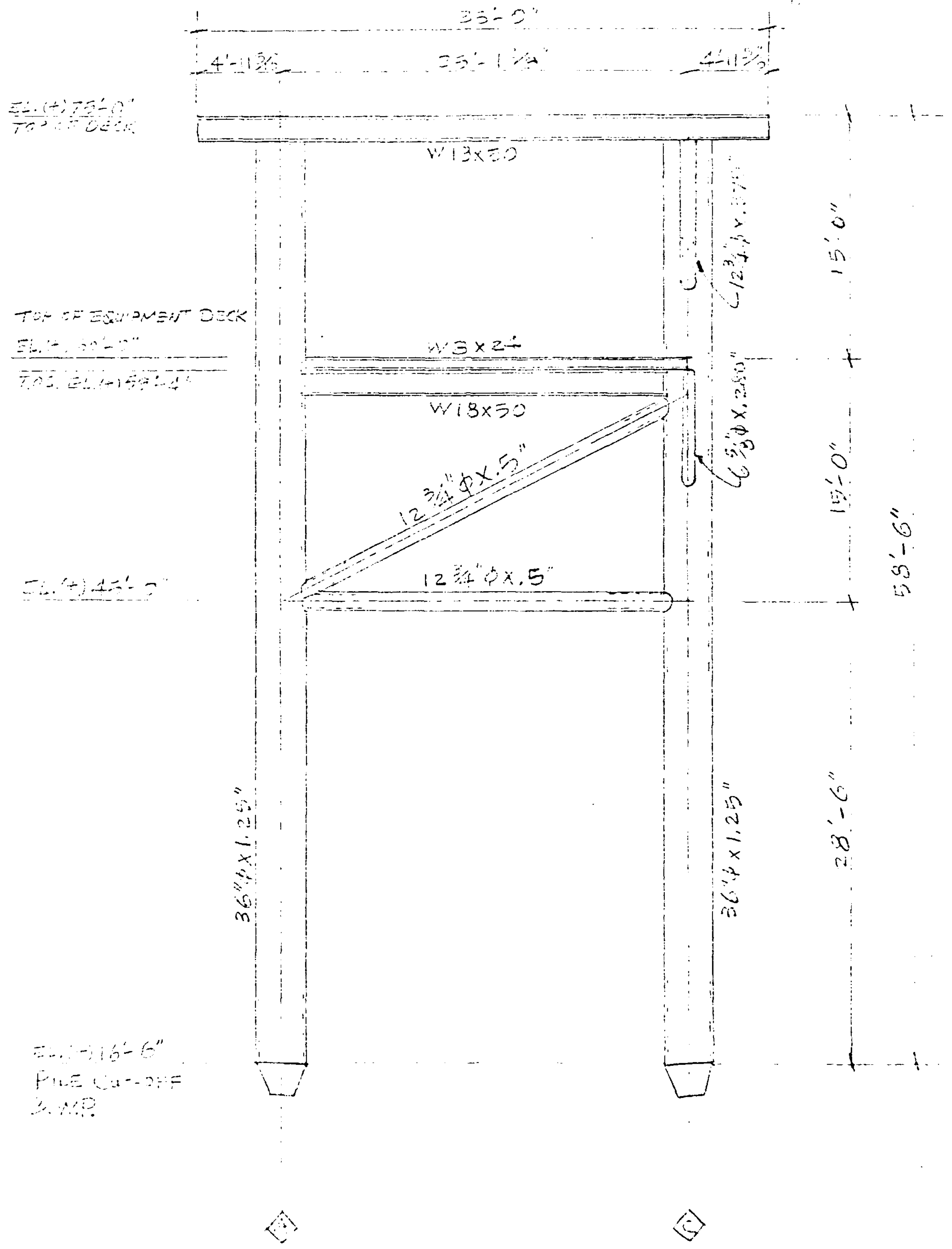


*25.093' = 25.115'
= 25'-1 3/8"

CREST OFFSHORE, INC.

Sheet 7.11 of 15

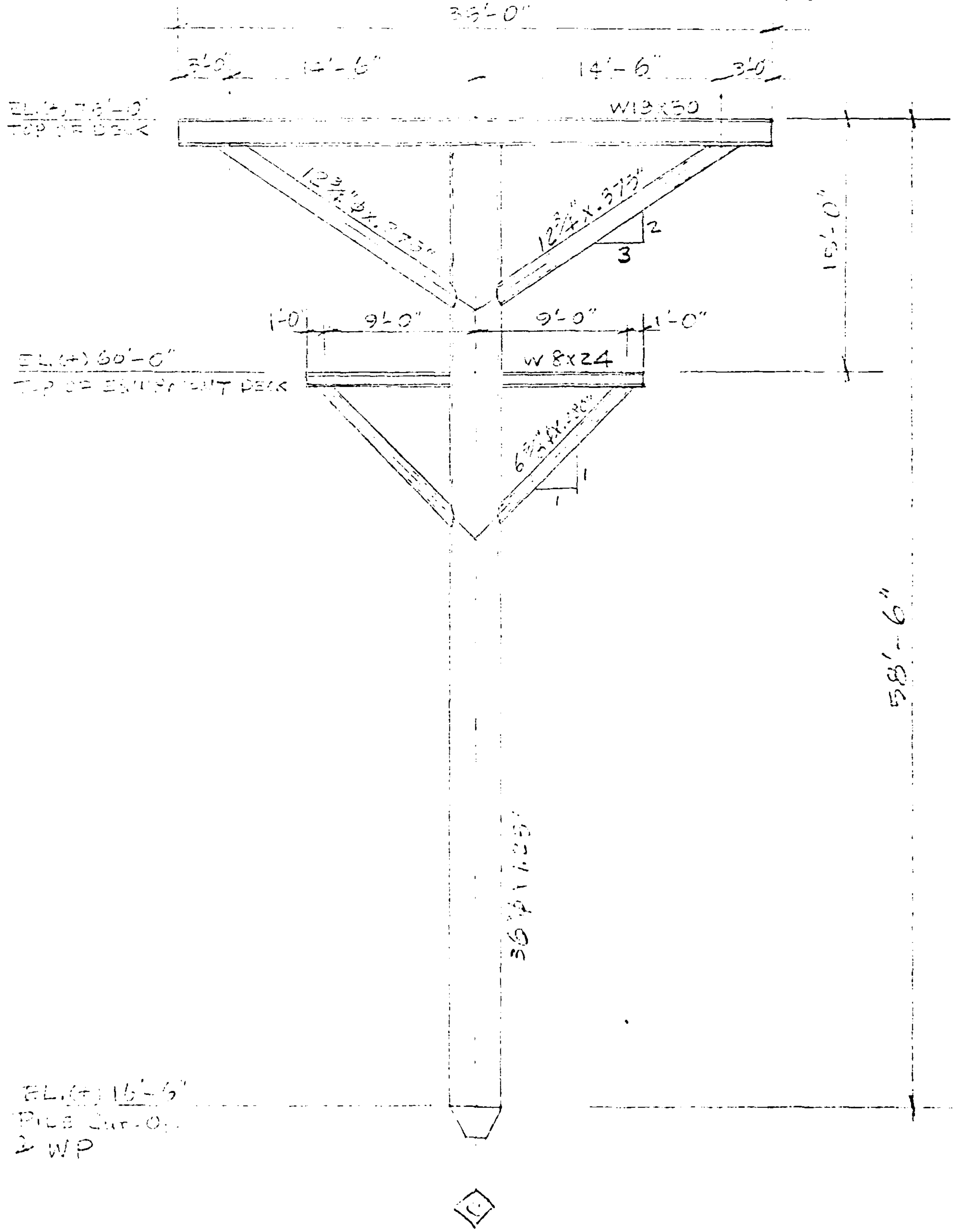
By ______ Client U.S. NAVY ______ Subject ______
Date ______ Job No. ______ Calculation ______



CREST OFFSHORE, INC.

Sheet 7.12 of 12

by [illegible] Client U.S. NAVY Subject [illegible]
Date [illegible] Job No. [illegible] Calculation [illegible]



CREST OFFSHORE, INC.

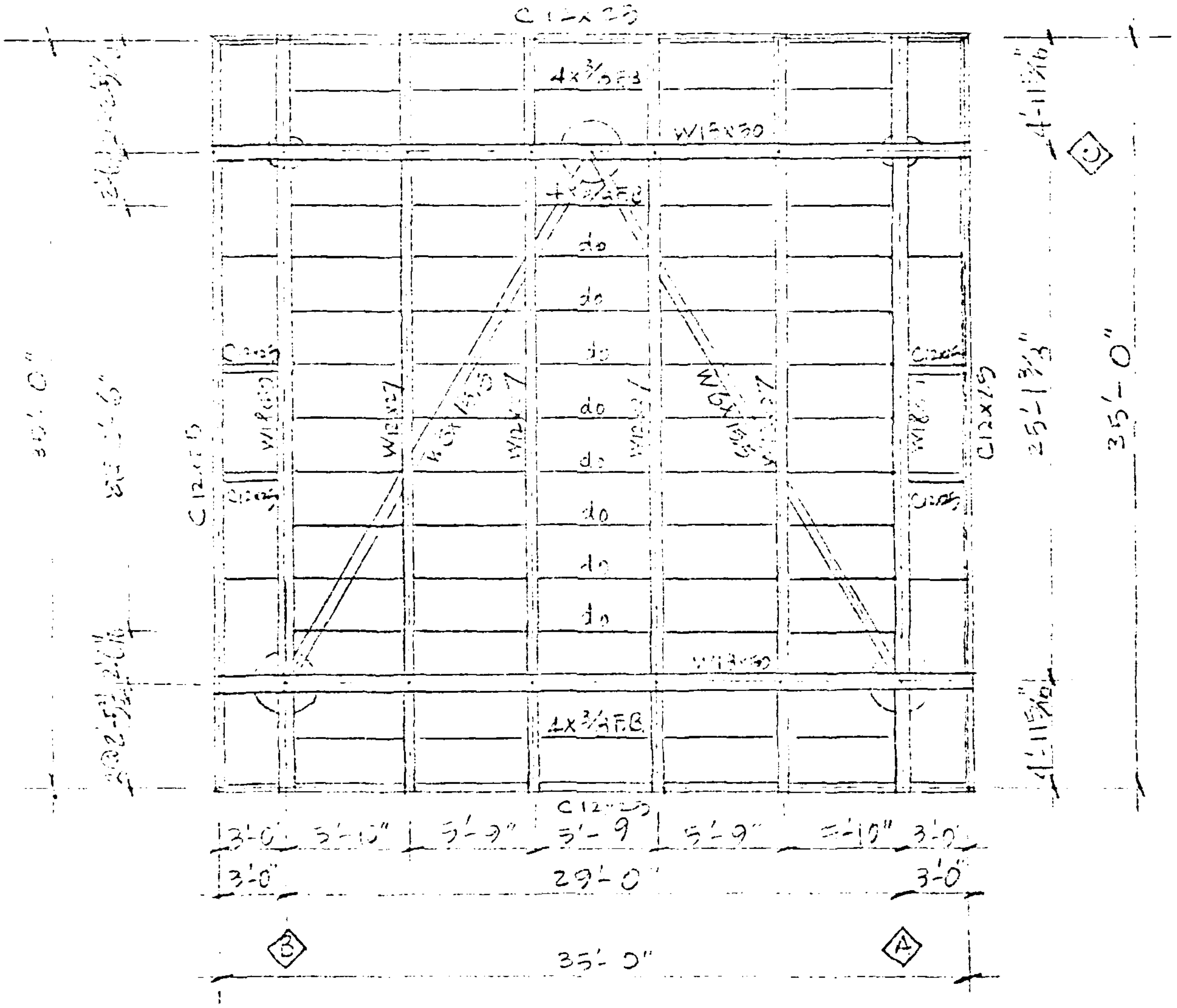
Sheet ... of ...

By C.C. ... Client U.S. NAVY ... Subject ...

Date ... Job No. ... Calculation ...

PLAN @ EL.(+)73'-0"

Scale 1/8" = 1'-0"



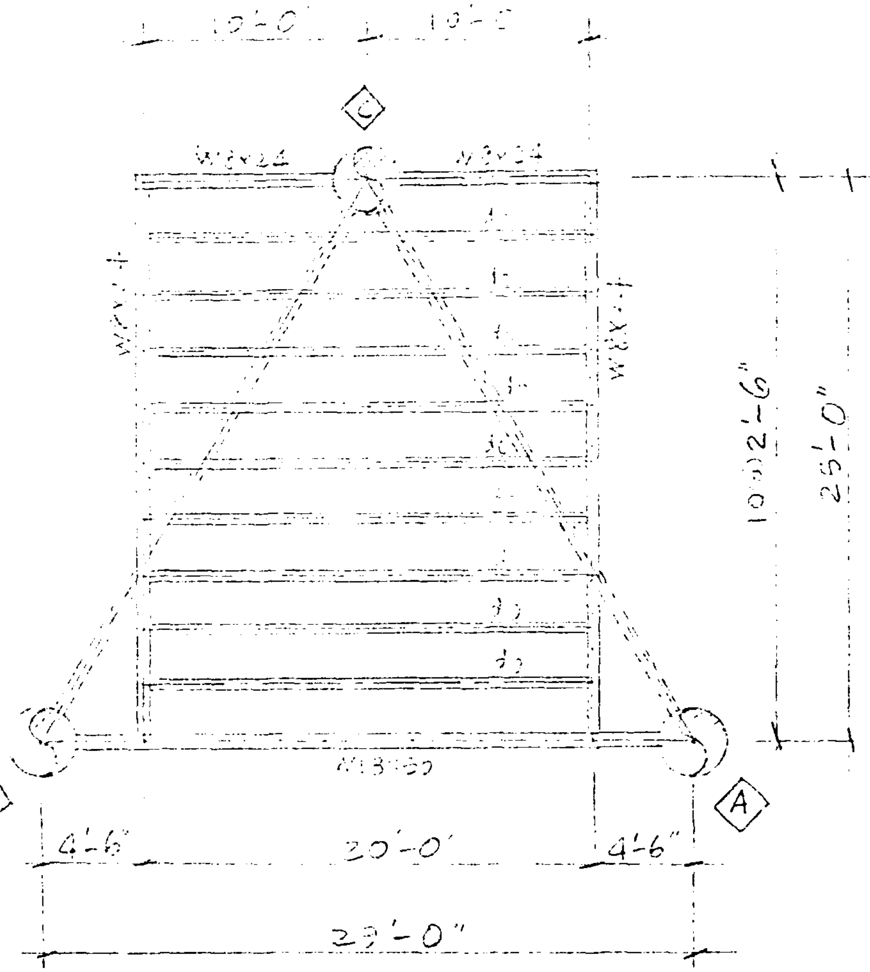
CREST OFFSHORE, INC.

Sheet 2.14 of 12

By [illegible] Client U.S. NAVY Subject Structural Concept [illegible]
Date [illegible] Job No [illegible] Calculation [illegible] Configuration

PLAN @ EL. +[illegible]

SCALE 1/3" = 1'-0"



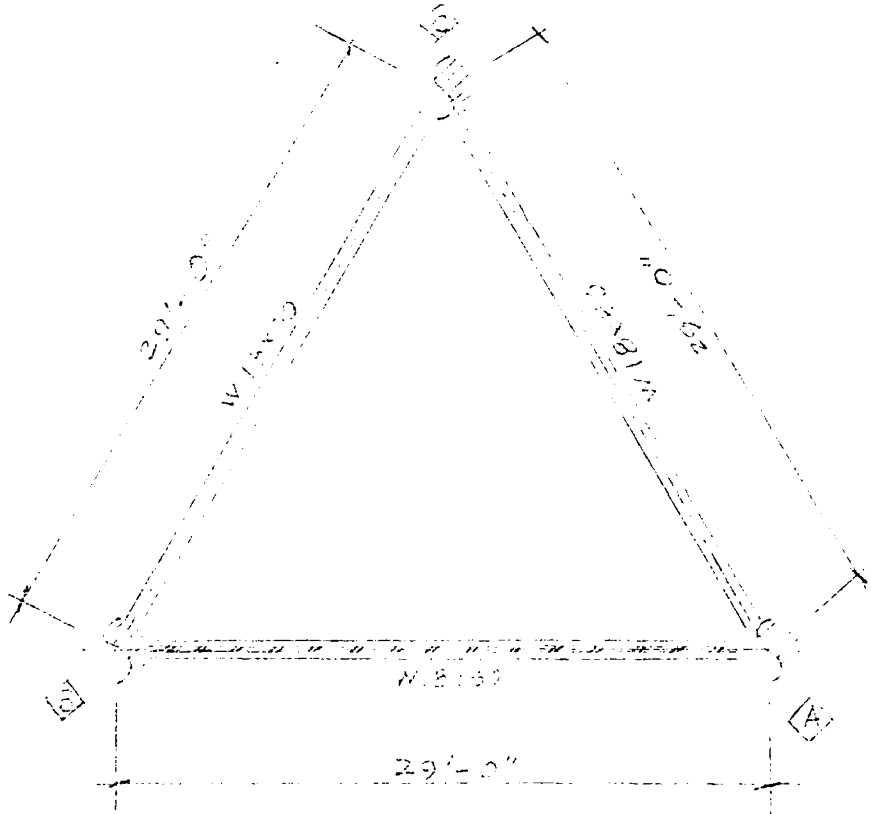
CREST OFFSHORE, INC.

Sheet [illegible] of [illegible]

By [illegible] Client [illegible] Subject [illegible] Concept [illegible]
Date [illegible] Job No. [illegible] Calculation [illegible]

PLAN @ EL.(+) 59'-4"

SCALE 1/3" = 1'-0"



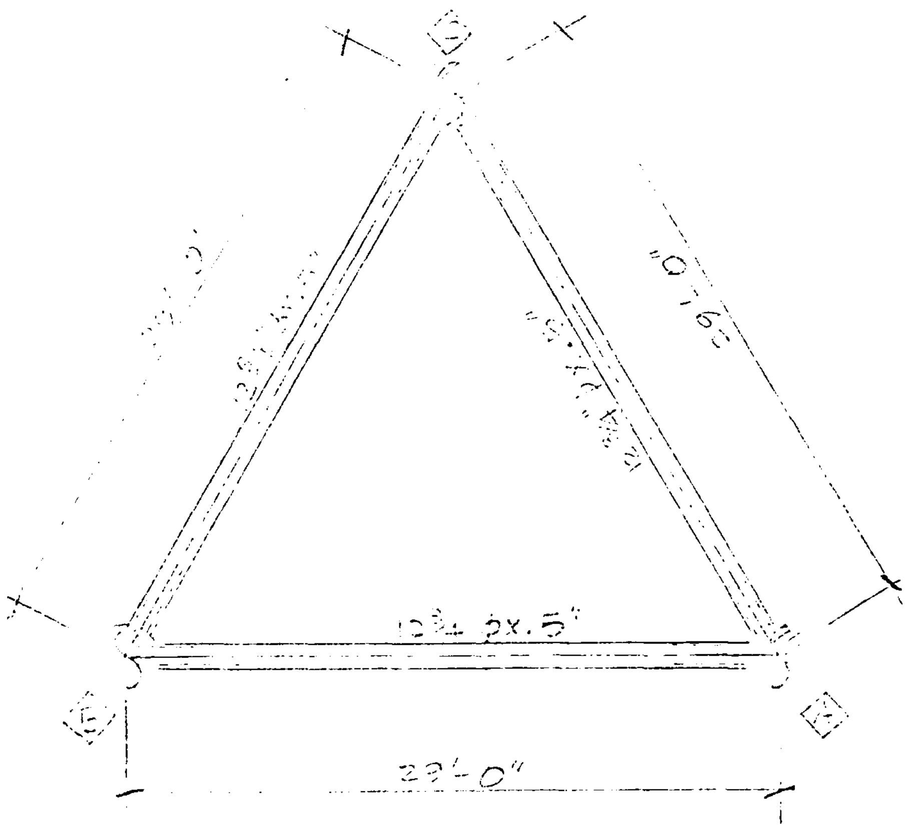
CREST OFFSHORE, INC.

Sheet 16 of 16

By C. Chow Client U.S. NAVY Subject Structural Concept Analysis (3

Date 4-6-76 Job No. 27-771-04 Calculation Structural Configuration

PLAN @ EL(+) 45'-0"



SECTION 8

STRUCTURAL IDEALIZATION

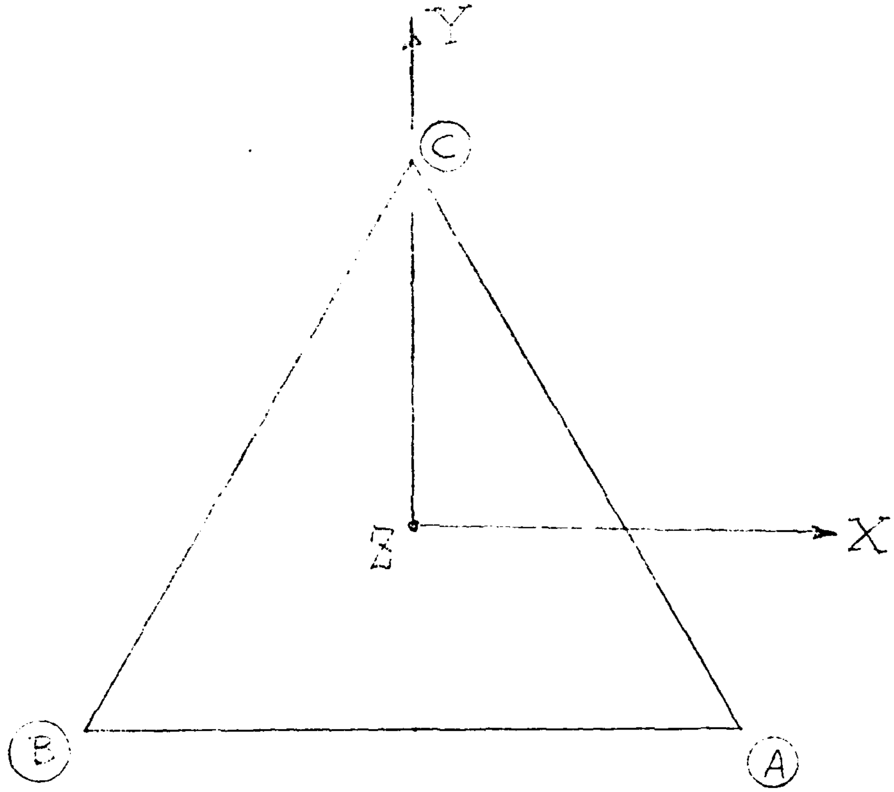
8.1 INTRODUCTION

The material within this section establishes the mathematical idealization of the three-pile structural concept. This material consists of joint coordinates, member locations, member sizes and location of reactions.

8.2 PLANS AND ELEVATIONS

KEY PLAN

SCALE 1/16" = 1'-0"



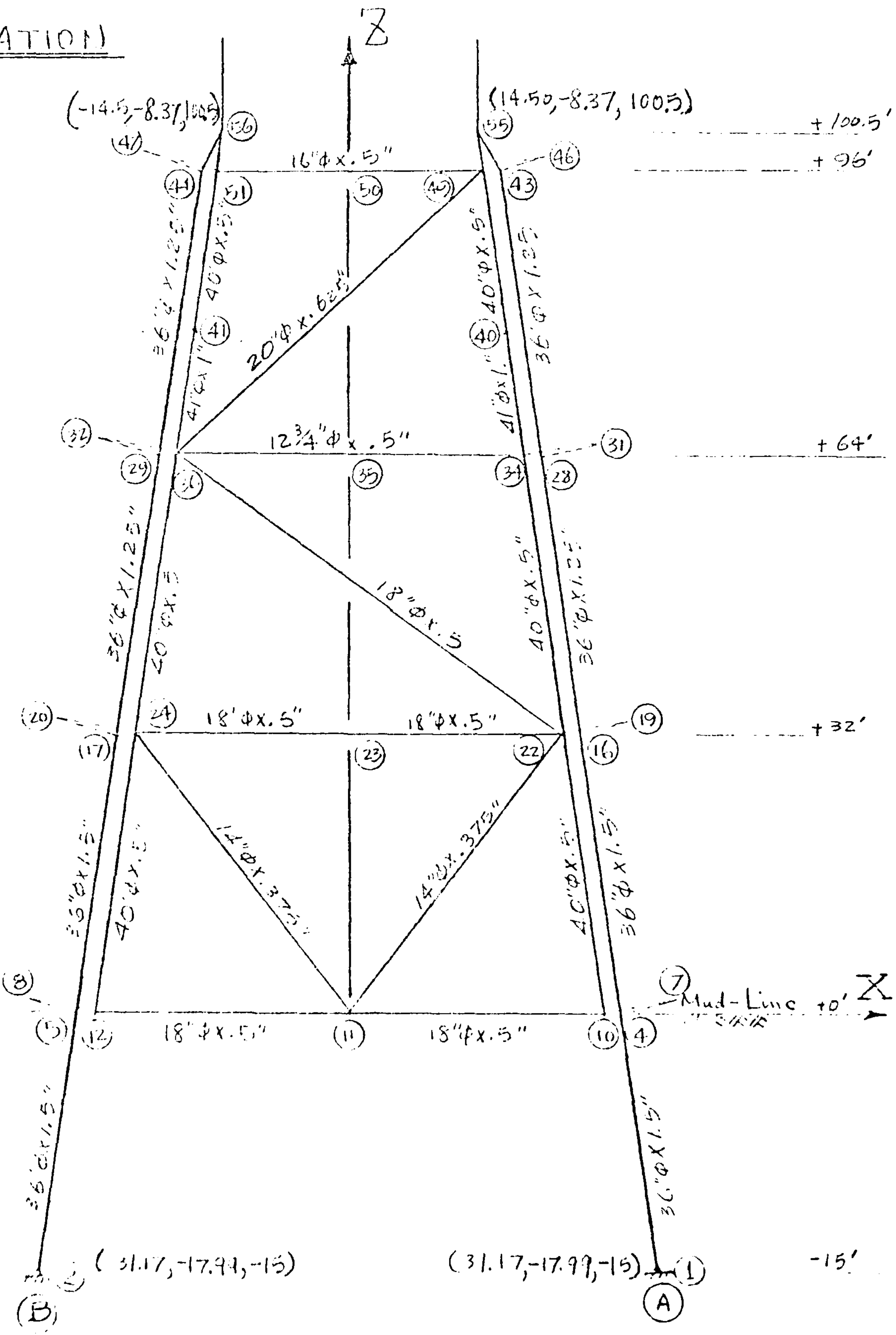
CREST OFFSHORE, INC.

Sheet ___ of 17

By C. Chen Client U.S. NAVY Subject Structural Concept Analysis

Date 4-2-7_ Job No. 37-771-__ Calculation Structural Analysis

ELEVATION



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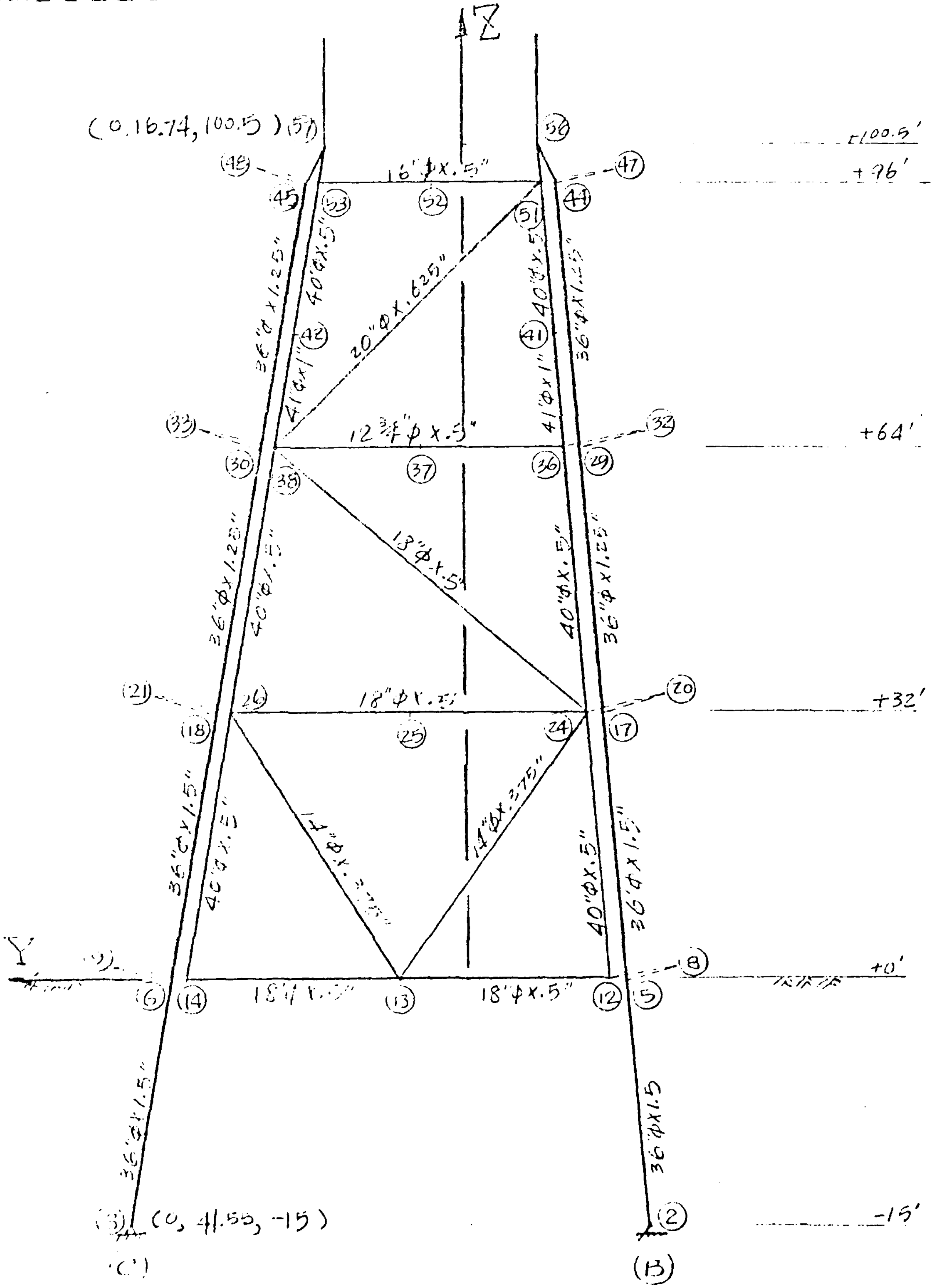
Sheet 9-25 of 17

By C. C. [illegible] Client U.S. NAVY Subject Structural Concept Analysis (pile)

Date 4-2-76 Job No 27-2771-24 Calculation Structural Idealization



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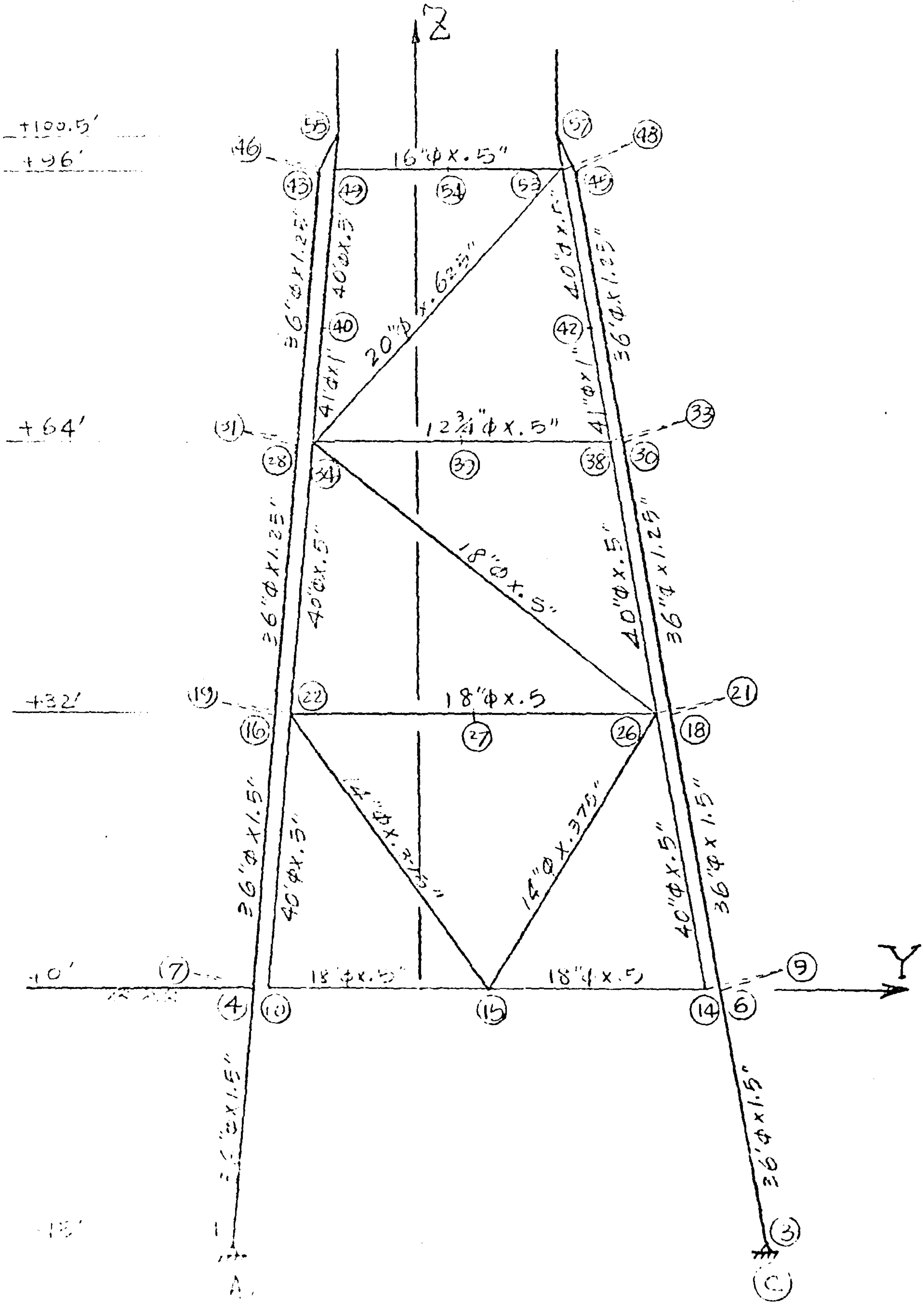
Sheet [illegible] of 17

By [illegible] Client U.S. NAVY Subject [illegible]

Date [illegible] Job No. [illegible] Calculation [illegible]



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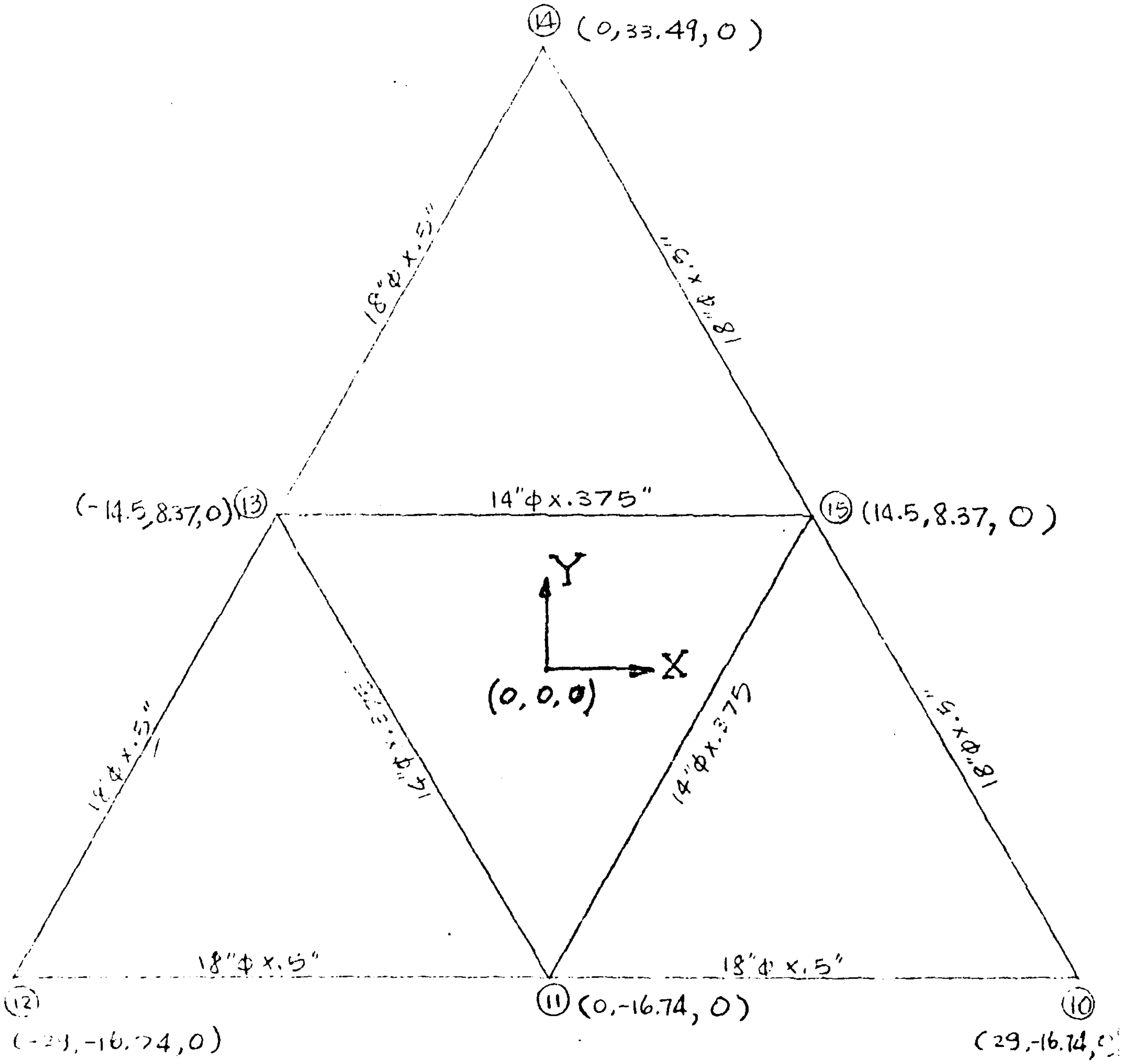
Sheet [illegible] of 17

By [illegible] Client [illegible] Subject Structural Concept Analysis (3-pile)
Date [illegible] Job No [illegible] Calculation Structural Idealization

PLAN

SCALE 1/8" 1' 0"



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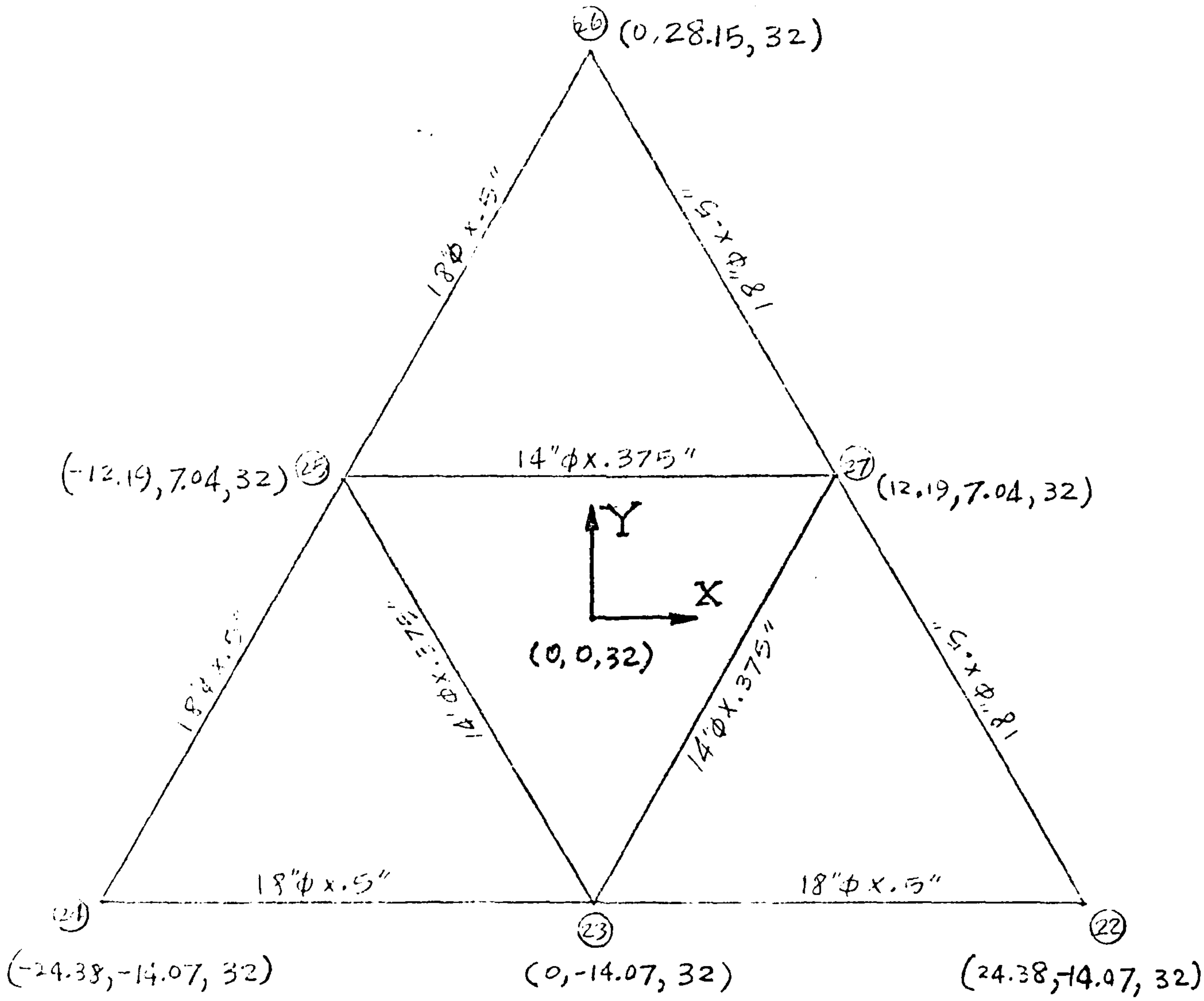
Sheet 6.32 of 17

By C. Chen Client U.S. Navy Subject Structural Concept Analysis
Date 4-7-76 Job No. 37-37-39 Calculation Structure Idealization



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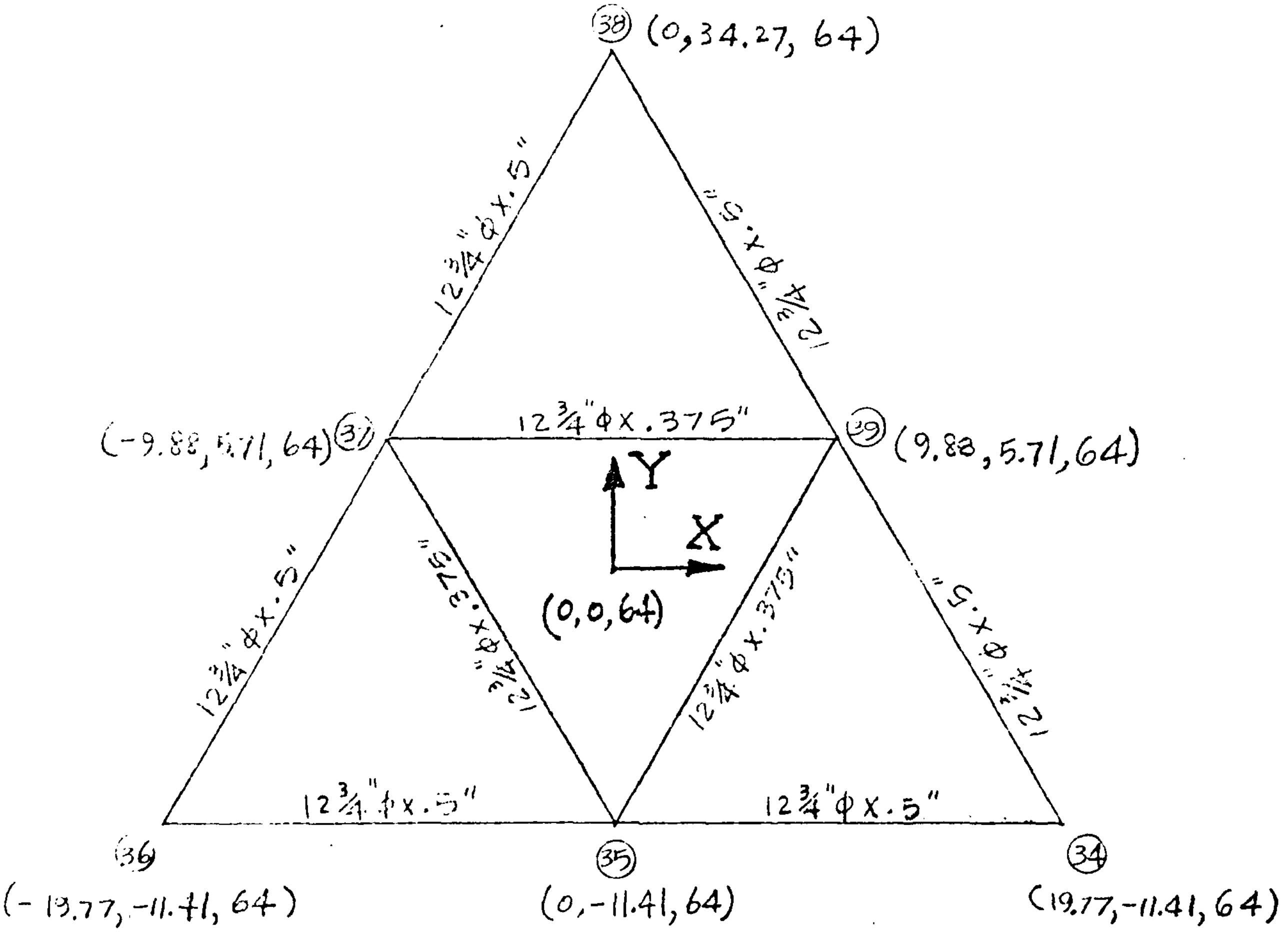
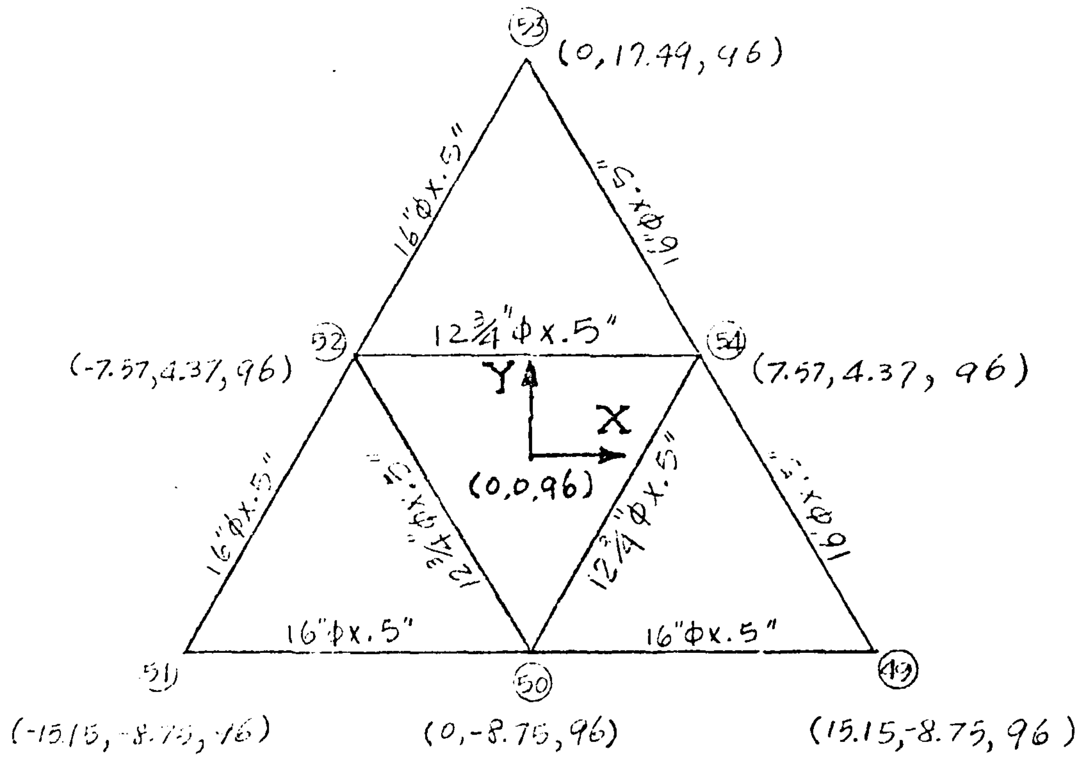
Sheet [illegible] of 17

By C. Chou Client U.S. NAVY Subject Structural Concept [illegible]
Date [illegible] Job No. [illegible] Calculation Structural Investigation



CREST OFFSHORE, INC.

By C. C... Client U.S. NAVY Subject ... Date 4-7-75 Job No. ... Calculation ...



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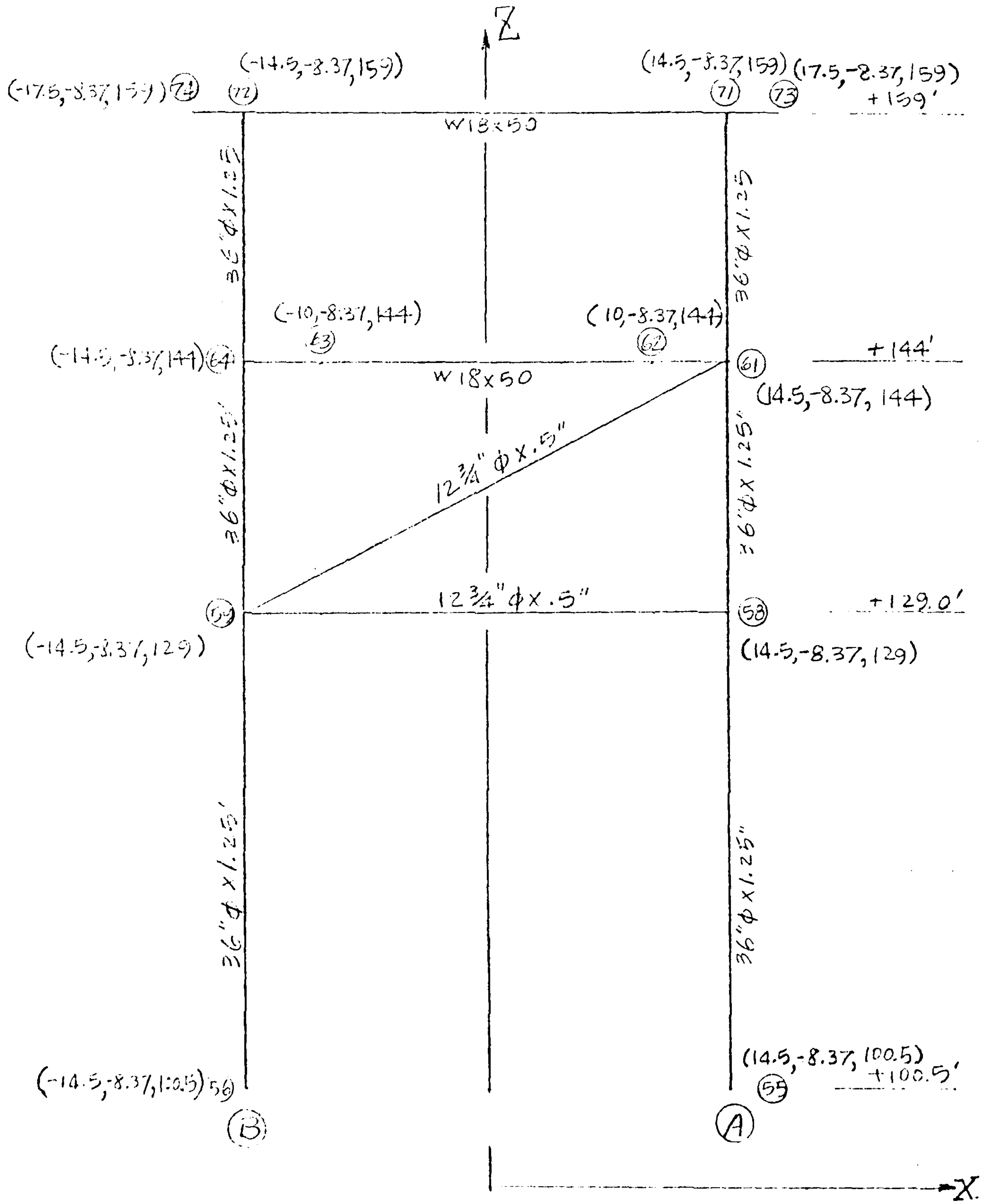
Sheet B.11 of 17 (B-pile)

By ____ Client U.S. NAVY ____ Subject ____

Date ____ Job No. ____ Calculation ____

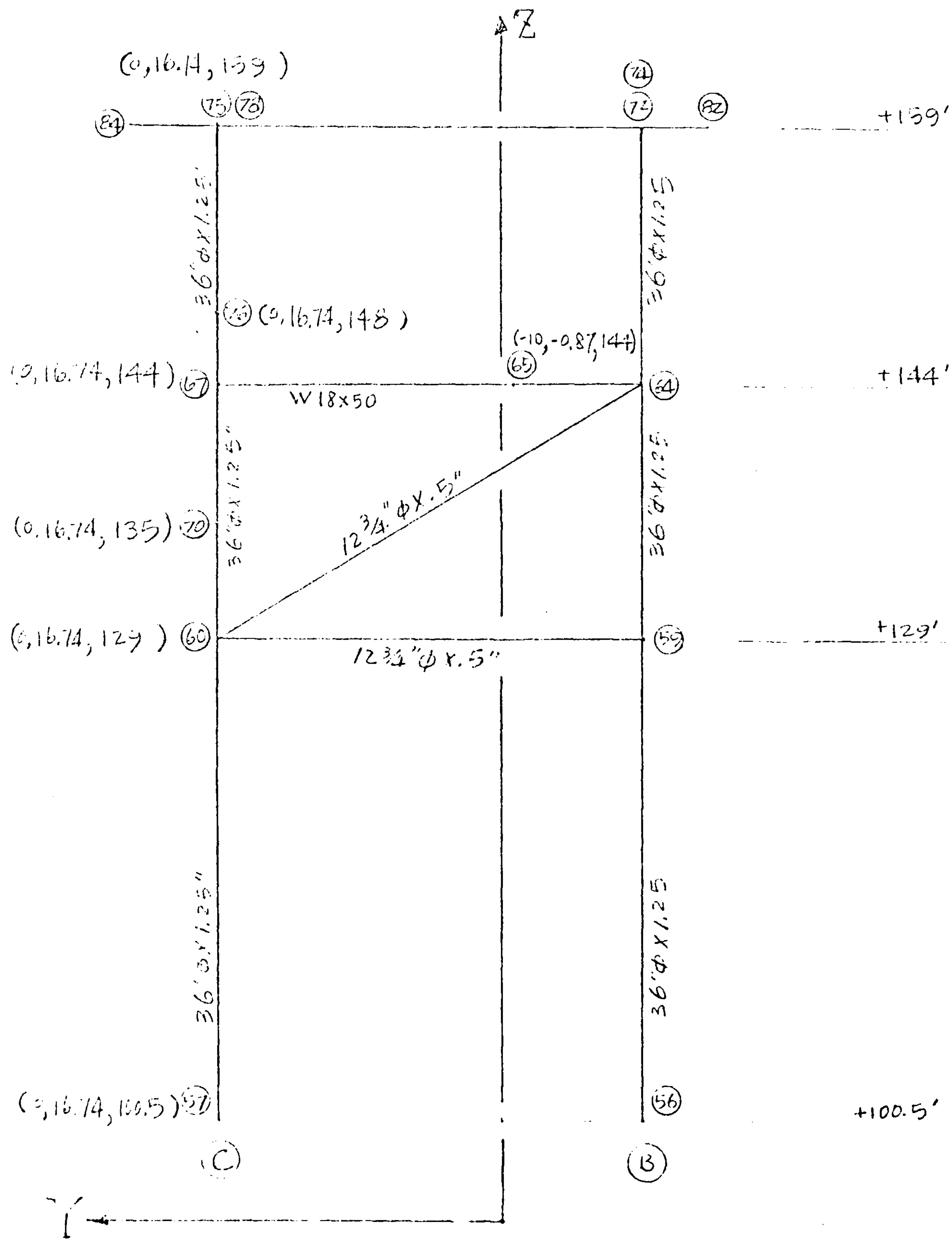


CREST OFFSHORE, INC.

Sheet ___ of 7

By ___ Client U.S. NAVY Subject Structural Concept Analysis

Date 4-7-76 Job No. ___ Calculation Structural Idealization

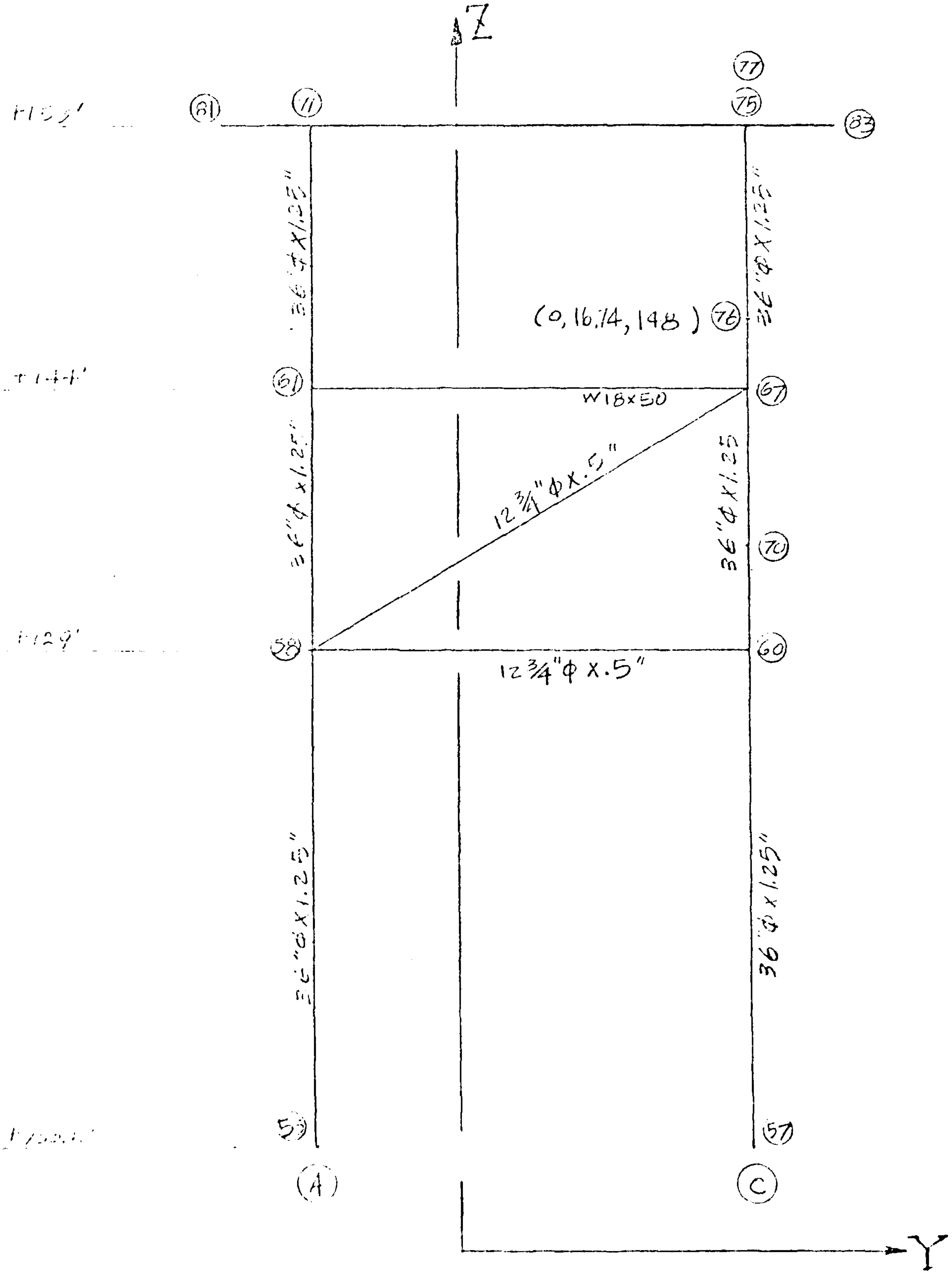


CRESTT OFFSHORE, INC.

Sheet [illegible] of 17

By C. C[illegible] Client [illegible] Subject [illegible]

Date 4-7-76 Job No. [illegible] Calculation [illegible]

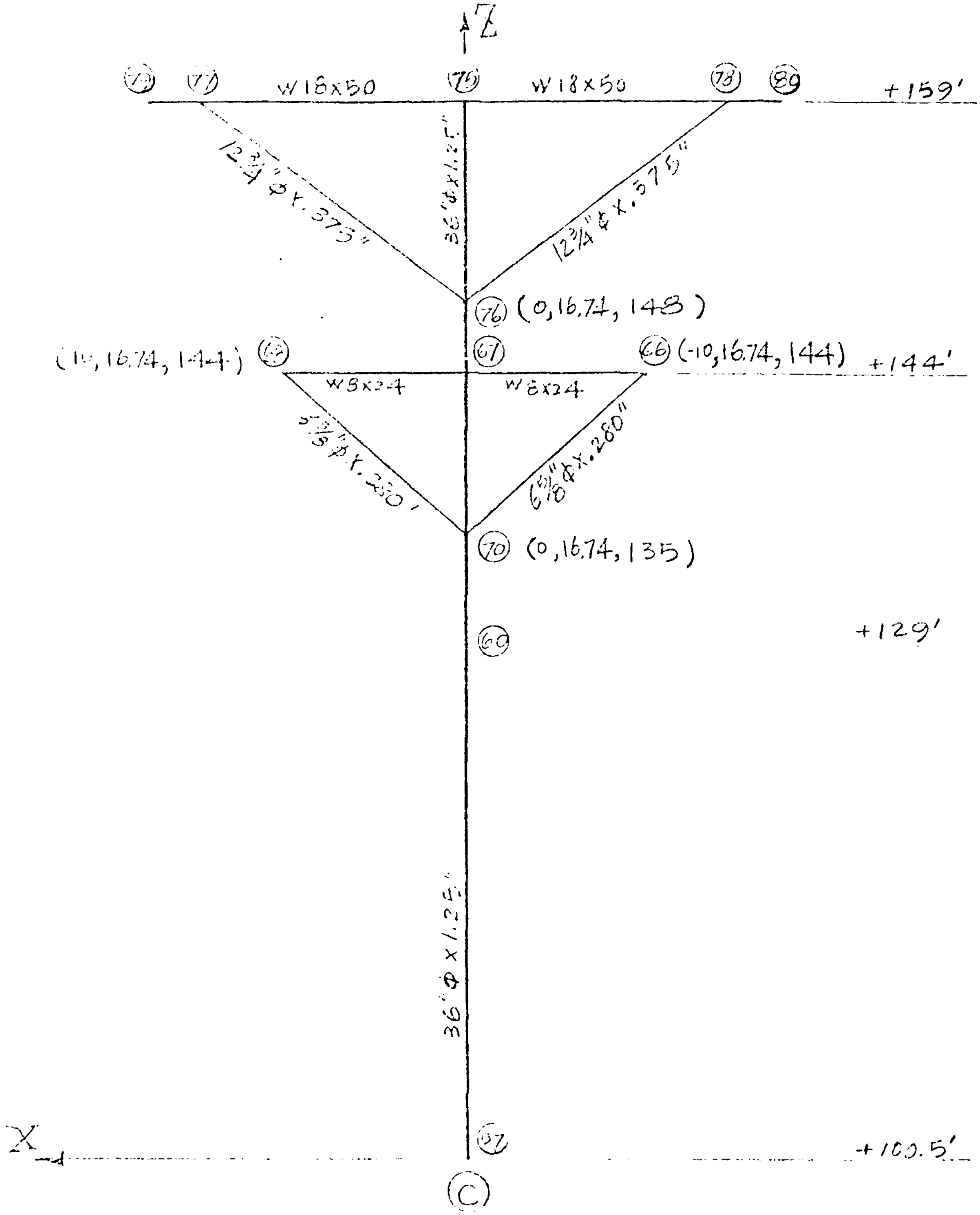


CREST OFFSHORE, INC.

Sheet 8.14 of 12

By C. Chang Client U.S. NAVY Subject Structural Concept Analysis

Date 4-8-76 Job No. 27-771-92 Calculation Structural Idealization



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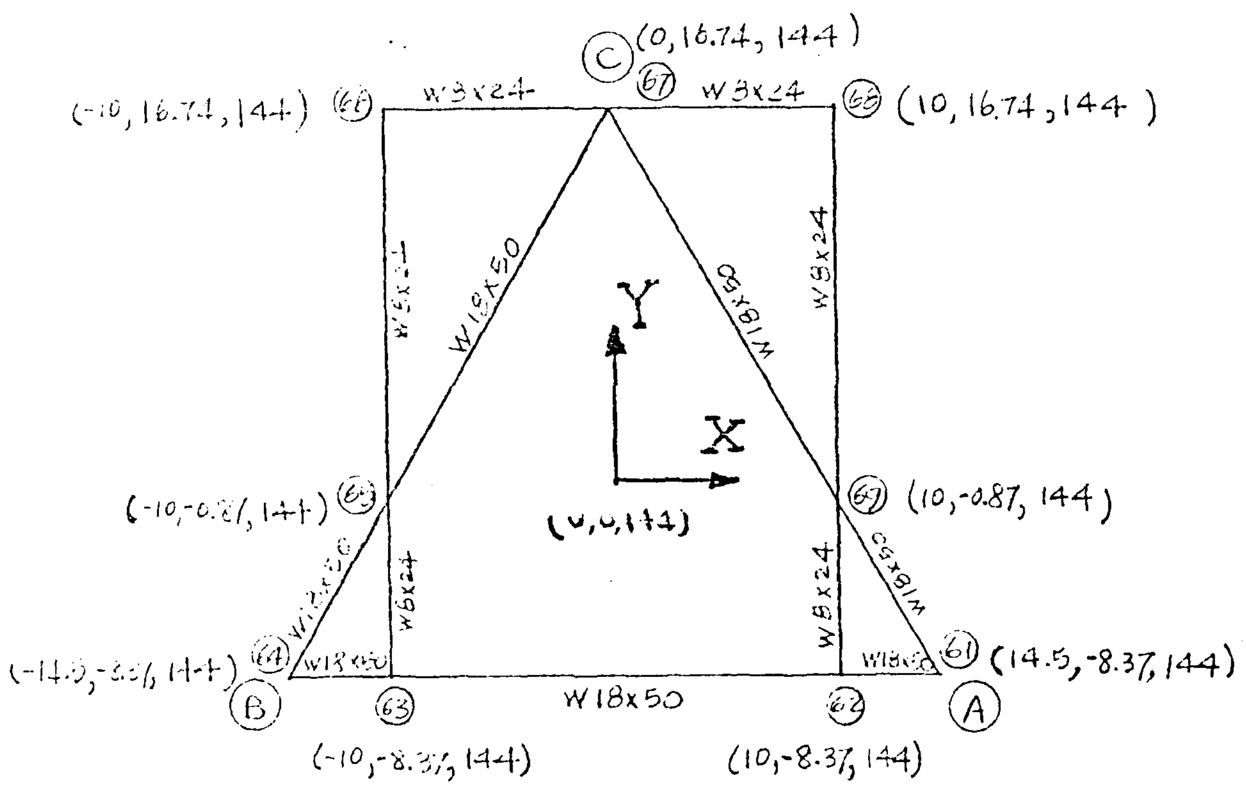
By C. Cl... Client U.S. NAVY Subject Structural (Concept Analysis) (3-pile)
Date 4-8-76 Job No 37-77... Calculation Structural Idealization



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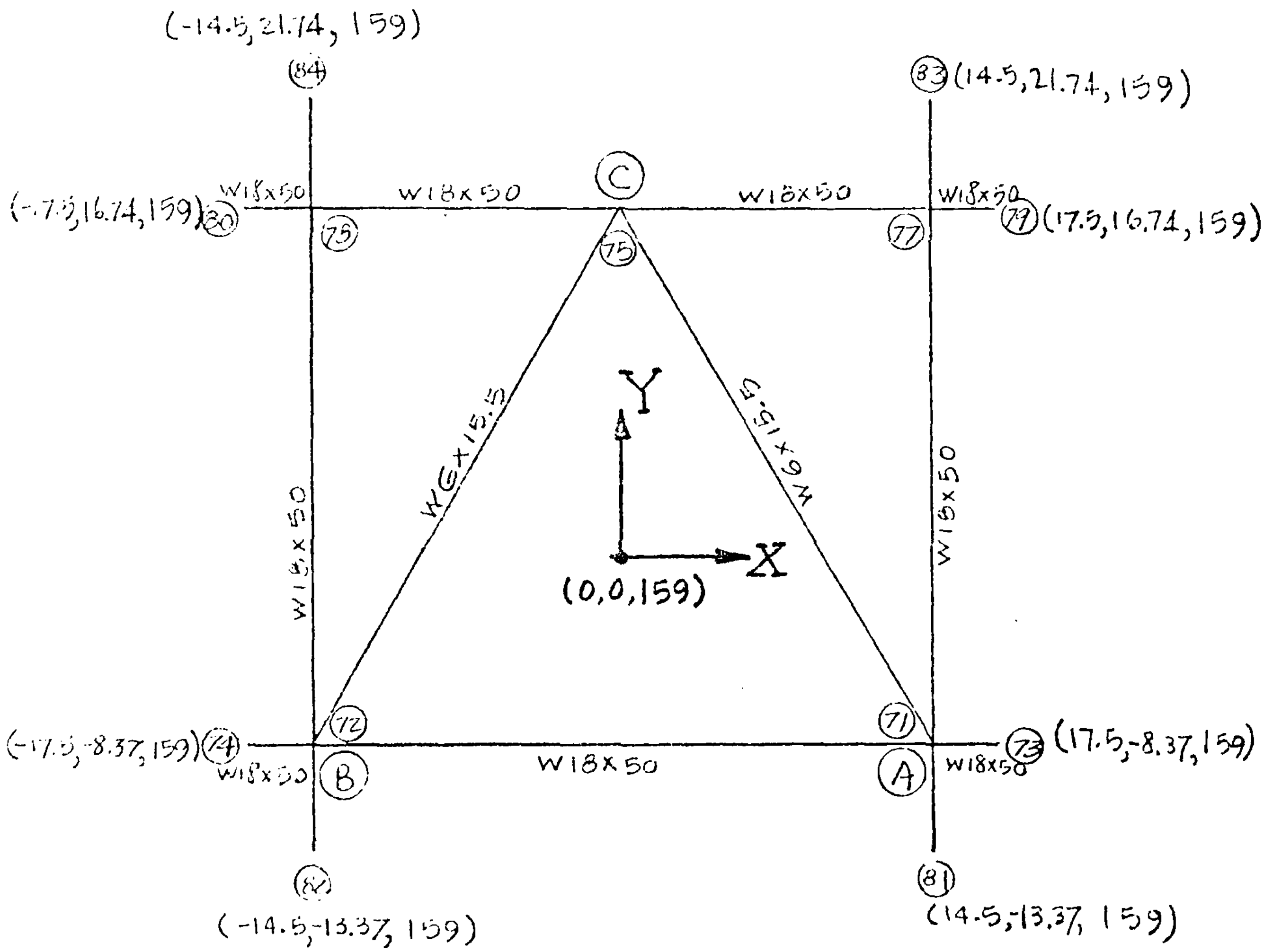
Sheet B-16 of 17

By C. Chen Client U.S. NAVY Subject Structural Concept Analysis

Date 4-3-76 Job No. 27-771-92 Calculation Structural Idealization



Member Group Designation

P10 = Pile group #1 36"Φ x 1.75" WT

P20 = Pile group #2 36"Φ x 1.25" WT

JL1 = Jacket Leg group #1 40"Φ x .5" WT

JL2 = Jacket Leg group #2 41"Φ x 1.0" WT

BR1 = Bracing 20"Φ x .625"

BR2 = Bracing 13"Φ x .5"

BR3 = Bracing 16"Φ x .5"

BR4 = Bracing 14"Φ x .375"

BR5 = Bracing 12¾"Φ x .5"

BR6 = Bracing 12¾"Φ x .375"

BR7 = Bracing 6⅝"Φ x .280

WBN = Fictitious wish-bone members 5" x 10" x 1" THK

STL = Superstructure legs 36"Φ x 1.25" WT

W18 = W 18x50

W08 = W 8x24

W06 = W 6x15.5

SECTION 9

BASIC LOADING CONDITIONS

9.1 INTRODUCTION

The calculations establishing design loads are presented herein. These loads are comprised of gravity loads, buoyancy and storm forces.

By C. Cheng Client U.S. NAVY Subject Structural Concept Analysis
Date 4-27-76 Job No. 27-771-2 Calculation Basic Loading Condition

3.2 DEAD LOADS

The dead weight tabulated in this section was for the preliminary design only. No effort was made to update the weight due to subsequent modification on the structural components.

CREST OFFSHORE, INC.

Sheet 203 of 27 (5-pile)

By C. Chen Client U.S. NAVY Subject Structural Concept Analysis
Date [illegible] Job No. 27-771-92 Calculation Basic Loading Conditions

JACKET

MEMBER SIZE	MEMBER LENGTH	NO. REQUIRED	TOTAL LENGTH	UNIT WEIGHT	TOTAL WEIGHT
IN. X IN.	FT		FT	LBS/FT	LBS
41" O.D. x 1" WT	6.0	3	18.0	427.2	7,689.6
	10.0	3	30.0		12,816.3
	18.0	3	54.0		23,069.3
	6.79	3	20.4		8,714.9
			122.4		52,290.1
40" O.D. x .5" WT	25.44	3	76.3	210.9	16,091.7
	23.44	3	70.3		14,826.3
	14.44	3	43.3		9,132.0
			189.9		40,050.0
24" O.D. x .75" WT	5.0	3	15.0	186.2	2,793.0
24" x 18" x .75" CONE		6		160.0	960.0
[illegible]" O.D. x .75" WT	5.0	3	15.0	138.2	2,073.0
[illegible]" O.D. x .5" WT	[illegible]	6	144.0	93.5	13,464.0
	40.2	6	241.2		22,552.2
	20.5	6	123.0		11,500.5
	54.5	3	163.5		15,287.3
			671.7		62,804.0

CREST OFFSHORE, INC.

Sheet 9.04 of 27

By C. C. [illegible] Client U.S. NAVY Subject Structural Concept Analysis [illegible]
Date 4-12-76 Job No. [illegible] Calculation Basic Loading Conditions

MEMBER SIZE	MEMBER LENGTH	NO. REQUIRED	TOTAL LENGTH	UNIT WEIGHT	TOTAL WEIGHT
IN. X IN.	FT		FT	LBS/FT	LBS
14"O.D.x.375"WT	29.0	3	87.0	54.6	4,750.2
	24.4	3	73.2		3,996.7
			160.2		8,746.9
12¾"O.D.x.75"WT	5.0	3	15.0	96.1	1,441.5
12¾"O.D.x.5"WT	17.25	6	103.5	65.4	6,768.9
	12.5	3	37.5		2,452.5
			141.0		9,221.4
[illegible] .375"WT	19.7	3	[illegible].1	49.6	2,931.4
20"O.D.x.625"WT	47.3	3	141.9	129.3	18,347.7
16"O.D.x.75"WT	5	3	15.0	122.2	1,833.0
16"O.D.x.5"WT	12.5	6	75.0	82.8	6,210.0
6⅝"O.D.x.280"WT	10.0	3	30.0	19.0	570.0
	5.0	3	15.0		285.0
	2.5	3	7.5		142.5
			52.5		997.5
T[illegible]					210,670#

CREST OFFSHORE, INC.

By C. Ch[illegible] Client U.S. NAVY Subject Structural Concept Analysis [illegible]
Date 4-12-78 Job No. [illegible] Calculation Basic Loading Conditions

SUPERSTRUCTURE

MEMBER SIZE	MEMBER LENGTH	NO. REQUIRED	TOTAL LENGTH	UNIT WEIGHT	TOTAL WEIGHT
	FT		FT	LBS/FT	LBS
36" O.D. x 1.25" WT	57.0	3	171.0	464.0	79,344.0
24" O.D. x .5" WT	26.0	3	78.0	65.4	5,101.2
	28.6	3	85.8		5,611.3
			163.8		10,712.5
12¾" O.D. x .375" WT	16.7	2	33.4	49.6	1,656.6
6⅝" O.D. x .280" WT	11.2	2	22.4	19.0	425.6
W18x50	26.0	3	78.0	50.0	3,900.0
	35.0	4	140.0		7,000.0
			218.0		10,900.0
W12x27	35.0	4	140.0	27.0	3,780.0
W8x24	25.0	2	50.0	24.0	1,200.0
	20.0	10	200.0		4,800.0
			250.0		6,000.0
C10x25	35.0	4	140.0	25.0	3,500.0
	3.0	4	12.0		300.0
			152.0		3,800.0
W6x15.5	26.0	2	52.0	15.5	806.0

CREST OFFSHORE, INC.

Sheet 7-6 of 27

By C. Chen Client U.S. NAVY Subject Structural Concept Feasibility
Date 4-12-76 Job No [illegible] Calculation Basic Loading Conditions

MEMBER SIZE	MEMBER LENGTH	NO. REQUIRED	TOTAL LENGTH	UNIT WEIGHT	TOTAL WEIGHT
	FT		FT	LBS/FT	LBS
4×3/8 F.B.	5.75	33	189.8	5.10	968.0
	5.83	22	128.3		654.3
	3.0	4	12.0		61.2
			330.1		1,683.5
1/4" PL	35×35	1	1,225.0□'	10.2	12,495.0
	20×25	1	500.0		5,100.0
			1,725.0□'		17,595.0
TOTAL					136,703.2#

CREST OFFSHORE, INC.

Sheet 7.02 of 27 (3-pile)

By C. Chen Client U.S. NAVY Subject Structural Concept Analysis
Date 4-12-76 Job No. 22-771-92 Calculation Basic Loading Conditions

PILINGS -- Measured To 5-D Below Mudline

MEMBER SIZE	MEMBER LENGTH	NO. REQUIRED	TOTAL LENGTH	UNIT WEIGHT	TOTAL WEIGHT
	FT		FT	LBS/FT	LBS
36"O.D.x1.5"WT	47.65	3	142.95	552.7	79,008.5
36"O.D.x1.25"WT	69.44	3	208.33	463.9	96,644.3
TOTAL					175,652.8

CRUST OFFSHORE, INC.

Sheet 9.9 of 27

By C. Chern Client U.S. NAVY Subject Structural Concept Analysis
Date 4-13-76 Job No. 27 171 92 Calculation Basic Loading Conditions

SUMMARY

JACKET	210.7 KIPS
SUPERSTRUCTURE (EXCLUDING AUXILLIARY ATTACHMENT)	136.7 KIPS
PILINGS (EXCLUDING PORTIONS BEYOND 5-D BELOW MUDLINE)	175.7 KIPS
	523.1 KIPS

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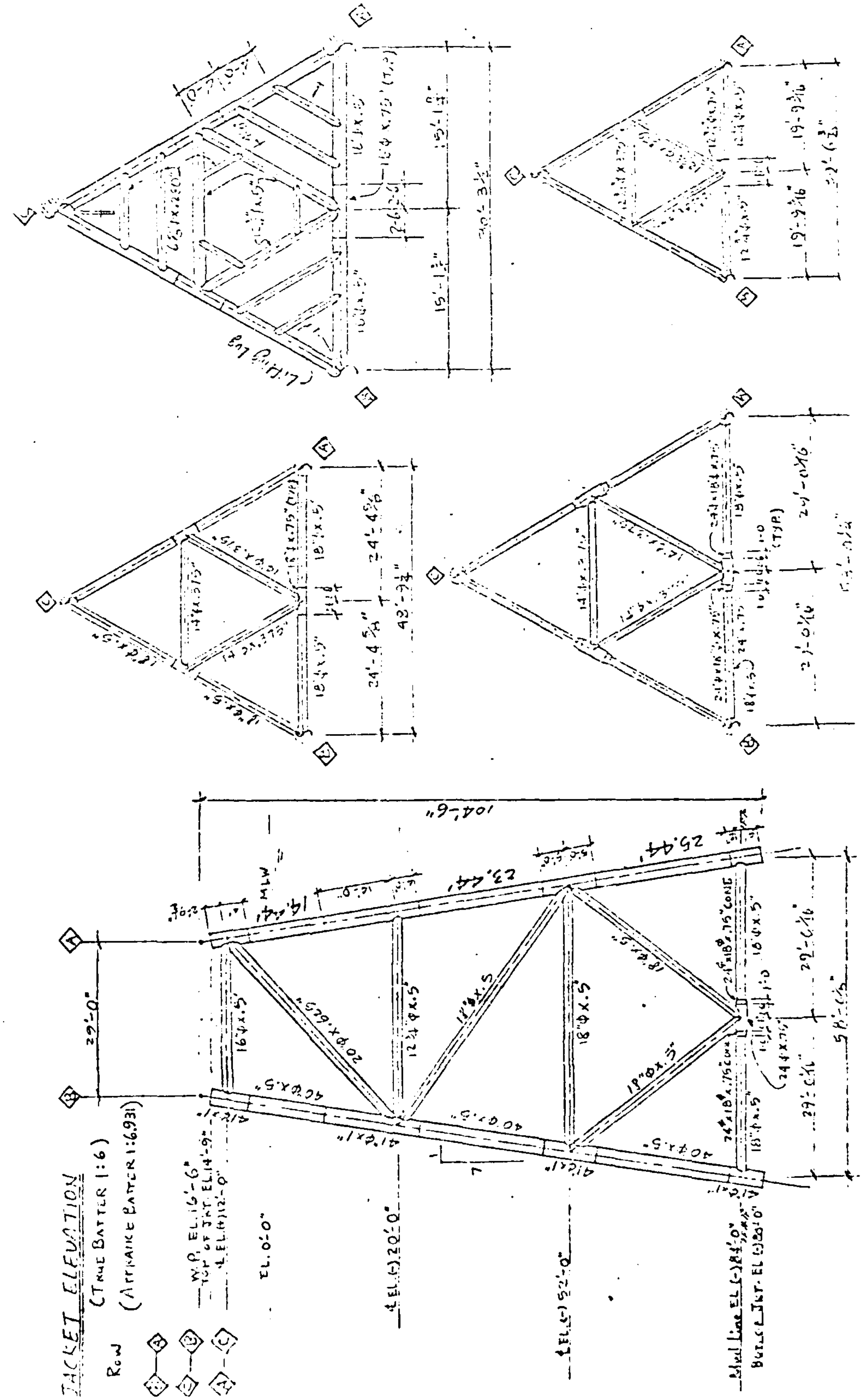
By C. Chen Client U.S. NAVY Subject Structural Concept Analysis

Date 4-12-76 Job No. Calculation



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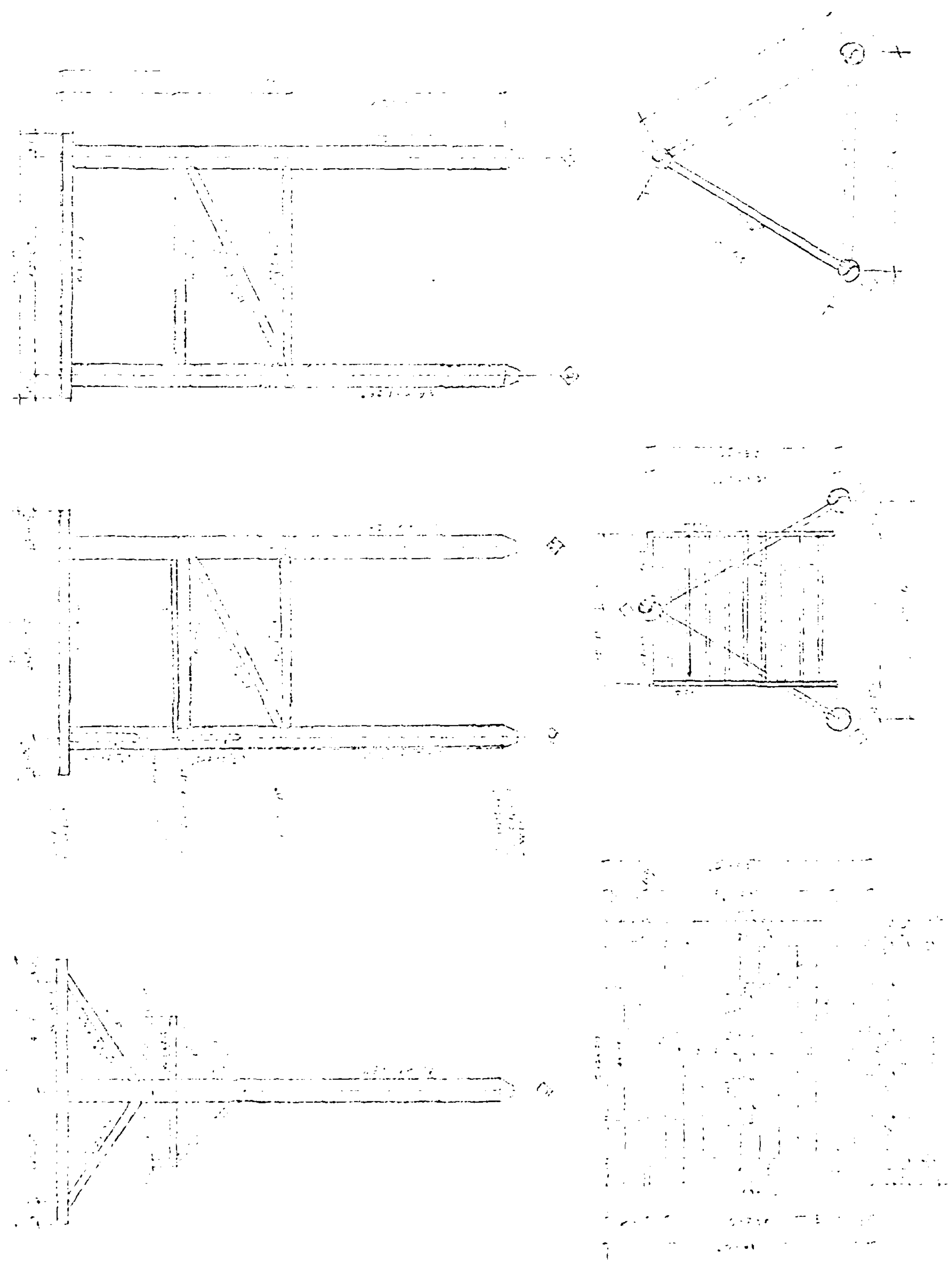
Sheet [illegible] of [illegible]

By [illegible] Client U.S. NAVY Subject Structural [illegible]

Date [illegible] Job No. 27-271-[illegible] Calculation [illegible] Loading [illegible]



9.3 BUOYANCY

The buoyancy effect on the structure was tabulated in this section. These data were for early stage of preliminary design only. No effort was made to update the data due to subsequent modifications on member sizes.

The application of buoyancy to the space frame analysis will be directly from SEALOAD-2 program presented in SECTION 10, Space Frame Analysis.

CREST OFFSHORE, INC.

Sheet 142 of 27 (3-71)

By C. C. [illegible] Client U.S. [illegible] Subject [illegible]

Date 4-12-76 Job No [illegible] Calculation [illegible]

Max. Crest Elevation = +142' above mudline

MEMBER SIZE	MEMBER LENGTH	UNIT VOLUME	BUOYANCY $\gamma = 64\#/\mathrm{ft}^3$	MOMENT ARM (WRT [illegible])	OVERTURNING MOMENT
IN. X IN.	FT	FT^3/FT	LBS	FT	FT-LBS
40" O.D. x .5" WT	100.5	0.43	2,766	41.85	115,757
40" O.D. x .5" WT	100.5x2	0.43	5,532	4.19	23,179
36" O.D. x 1.5" WT	32.4	1.13	2,343	47.56	111,433
36" O.D. x 1.5" WT	32.4x2	1.13	4,686	2.67	12,512
36" O.D. x 1.25" WT	64.9	0.95	3,739	39.56	147,915
36" O.D. x 1.25" WT	64.9x2	0.95	7,892	5.33	42,064
[illegible] O.D. x 1.25" WT	41.5	7.07	18,778	33.48	628,687
36" O.D. x [illegible] WT	41.5x2	7.07	37,556	8.37	314,344
[illegible] O.D. x .5" WT	[illegible]x2	1.77	13,140	25.11	329,945
14" O.D. x [illegible] WT	29.0	1.07	[illegible]	25.11	49,868
[illegible] WT	29.0x2	1.07	3,972	12.56	49,888
14" O.D. x [illegible] WT	40.2x4	1.07	11,012	25.11	276,511
[illegible]	40.2x2	1.07	5,506	1.33	7,323
19" [illegible]	48.75x2	1.77	11,045	[illegible]	262,650
19" [illegible]	48.75	1.77	5,522	2.67	14,744

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Sheet [illegible] of 37

By [illegible] Client [illegible] Subject Structural [illegible]

Date [illegible] Job No. [illegible] Calculation Basic Loading [illegible]

MEMBER SIZE	MEMBER LENGTH	UNIT VOLUME	BUOYANCY $\gamma = 64^{\#}/ft^3$	MOMENT ARM	OVERTURNING MOMENT
IN. × IN.	FT	FT³/FT	LBS	FT	FT-LBS
14" O.D. × .375 WT	24.4	1.07	1,671	23.80	39,770
14" O.D. × .375 WT	24.4 × 2	1.07	3,342	13.24	44,248
18" O.D. × .5 WT	54.5 × 2	1.77	12,348	23.78	293,635
18" O.D. × .5 WT	54.5	1.77	6,174	4.0	24,696
12¾" O.D. × .5" WT	31.5 × 2	0.89	4,500	22.45	101,025
12¾ O.D. × .5 WT	39.5	0.89	2,250	5.33	11,993
[illegible] .375	19.7	0.89	1,122	22.45	25,191
12¾ O.D. × .375	19.7 × 2	0.89	2,244	13.89	31,169
20" O.D. × .625" WT	47.3 × 2	2.18	13,200	22.45	296,340
20" O.D. × .625" WT	47.3	2.18	6,600	7.91	52,206
[illegible]	[illegible]	1.40	5,376	21.37	114,885
[illegible]	30	1.40	2,688	8.38	22,525
[illegible] .5" WT	15	0.89	854	21.37	18,250
12¾" O.D. × .5" WT	15 × 2	0.89	1,708	14.88	25,415
12¾ [illegible] WT	29 × 2	0.89	3,304	20.94	69,186
[illegible]	27	0.89	1,552	8.[illegible]	13,761

CREST OFFSHORE, INC.

Sheet 2.14 of 27

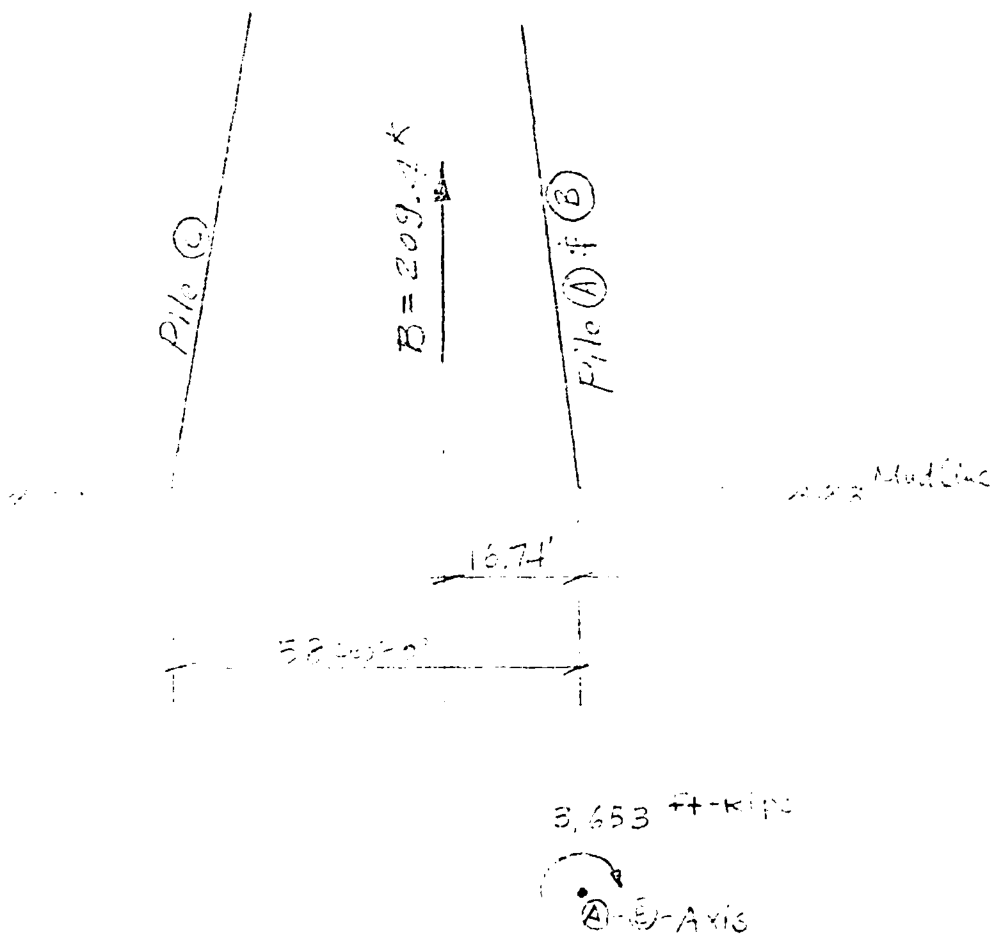
By C. Chen Client U.S. [illegible] Subject Structural Concept Analysis
Date [illegible] Job No. [illegible] Calculation Basic Loading Conditions

MEMBER SIZE	MEMBER LENGTH	UNIT VOLUME	BUOYANCY $\gamma = 64\#/CU.FT$	MOMENT ARM	OVERTURNING MOMENT
IN. x IN.	FT	FT^3/FT	LBS	FT	FT-LBS
[illegible] WT	28.[illegible]	[illegible]	[illegible]	[illegible]	13,676
[illegible] WT	28.[illegible] x 2	[illegible] 81	3,[illegible]4	20.94	68,348
TOTAL			209,404#		[illegible],[illegible]3,137

SUMMARY

BUOYANCY $B = 209.4$ kips

OVERTURNING MOMENT ABOUT Ⓐ-Ⓑ AXIS $M_B = 3{,}653$ ft-kips

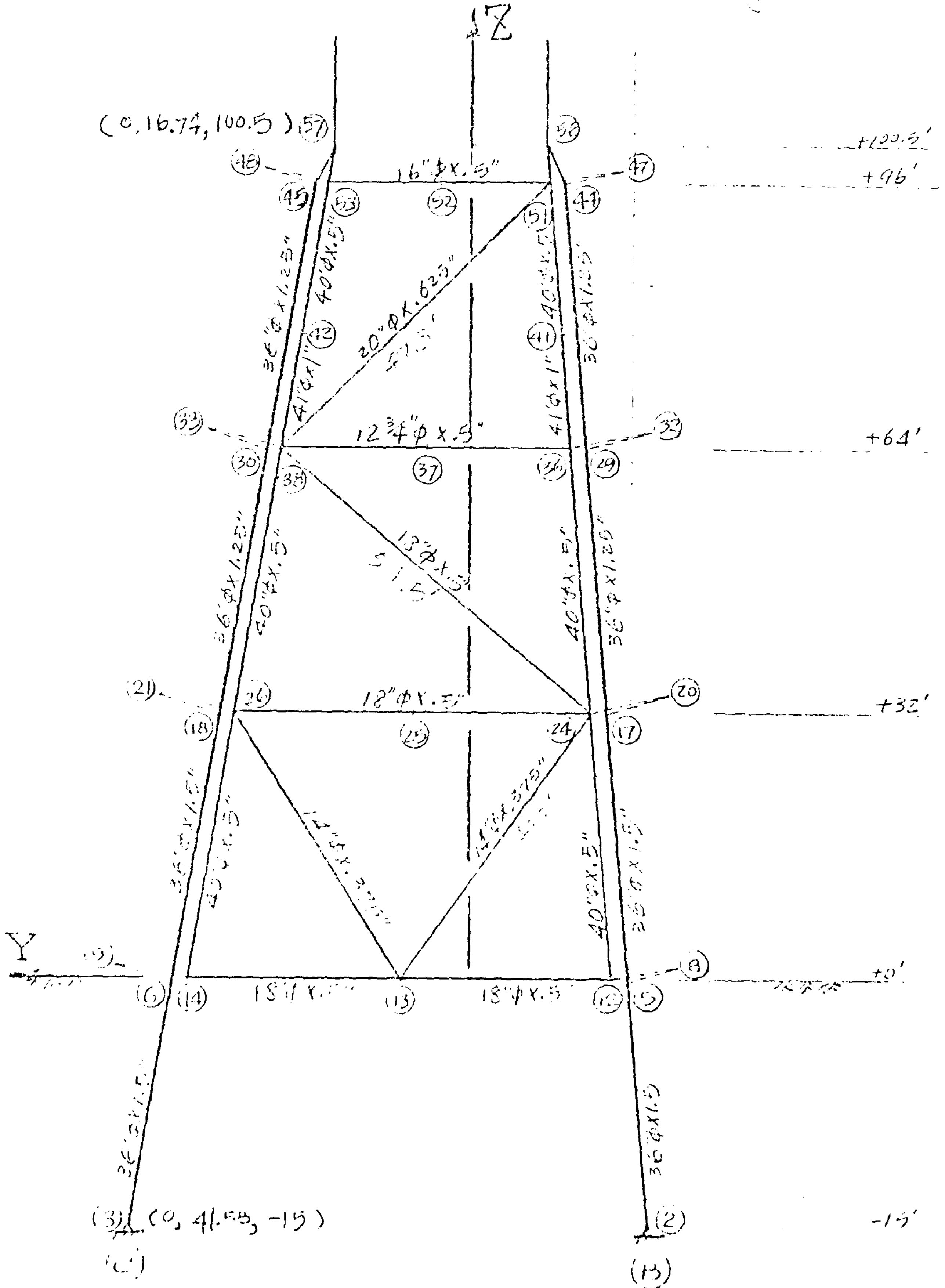


CREST OFFSHORE, INC.

Sheet ____ of ____

By ____ Client U.S. NAVY Subject ____

Date ____ Job No. ____ Calculation Basic Loading Conditions



CREST OFFSHORE, INC.

By C. Chen Client U.S. NAVY Subject Structural Concept Analysis
Date 4-28-78 Job No. 27-771-12 Calculation Basic Loading Conditions

6-3 LIVE LOADS

The specified live loads for the structure are as follows:

(1) 150 psf on equipment deck

(2) 100 psf on top deck

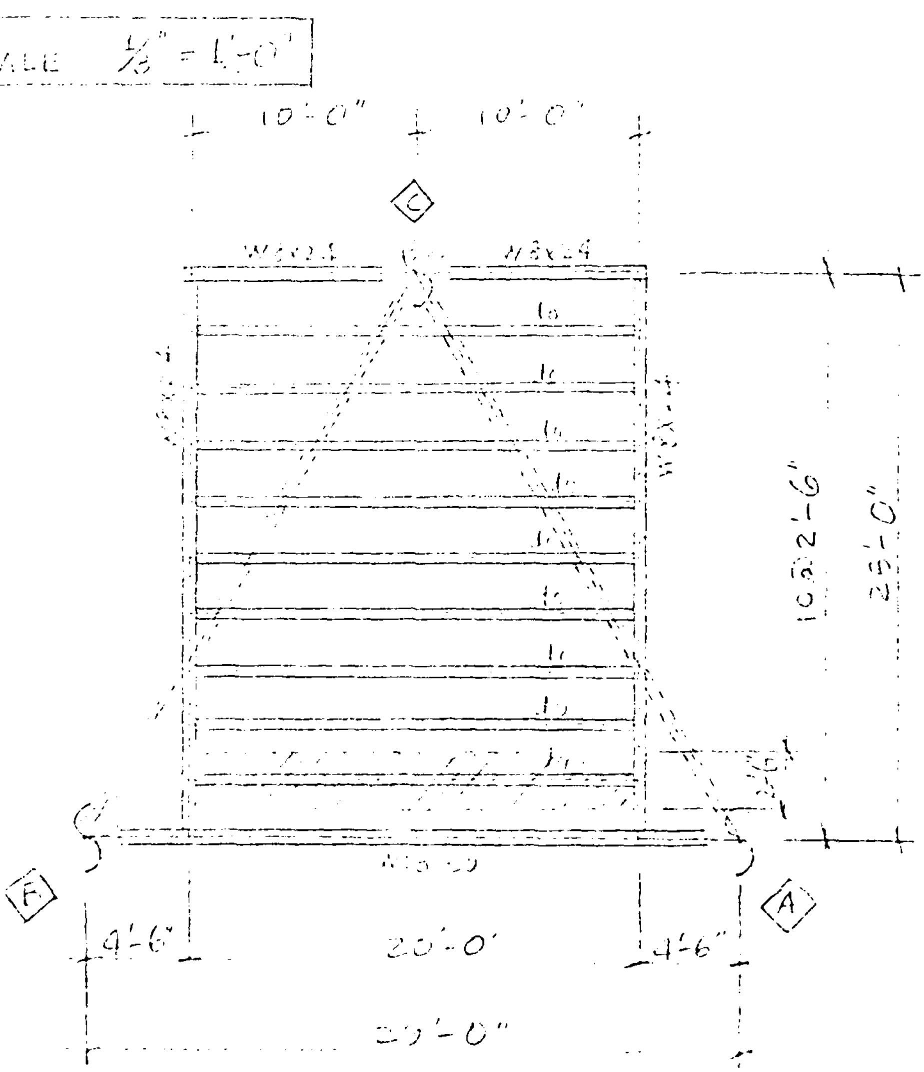
The live loads were used to check the size of deck beams and deck plate reinforcements.

CREST OFFSHORE, INC.

By C. ___ Client U.S. NAVY Subject Structural ___
Date 4-2-76 Job No. ___ Calculation ___

LIVE LOADS ON EQUIPMENT DECK

DESIGN LOADS (GIVEN) = 150 PSF



CREST OFFSHORE, INC.

By C. Chen Client U.S. NAVY Subject Structural Concept Analysis
Date 4-2-76 Job No. 27-771-92 Calculation Basic Loading Condition

Check Beam W 8x24

Span $l = 20'0''$

Tributary Area $A = 2.5 \times 20 = 50$ SQ. FT

Live Load $W_{LL} = 150 \times 50 = 7500^{\#}$

1/4" PL $W_{DL1} = 10.2 \times 50 = 510^{\#}$

W8x24 $W_{DL2} = 24 \times 20 = 480^{\#}$

Total Weight $= 8490^{\#}$

$w = 424.5 \ ^{\#}/ft$

Max. Mom. $M = \frac{wl^2}{8} = \frac{.4245 \times 20^2 \times 12}{8} = 254.7^{''K}$

W8x24 $S_x = 20.8^{in^3}$

Max Stress $f = \frac{254.7}{20.8} = 12.25^{ksi} < 22^{ksi}$

O.K.

* Note: Continuous sealed welds of 1/4" plate and the compression flange will provide sufficient lateral support to the compression flange against lateral buckling.

CREST OFFSHORE, INC.

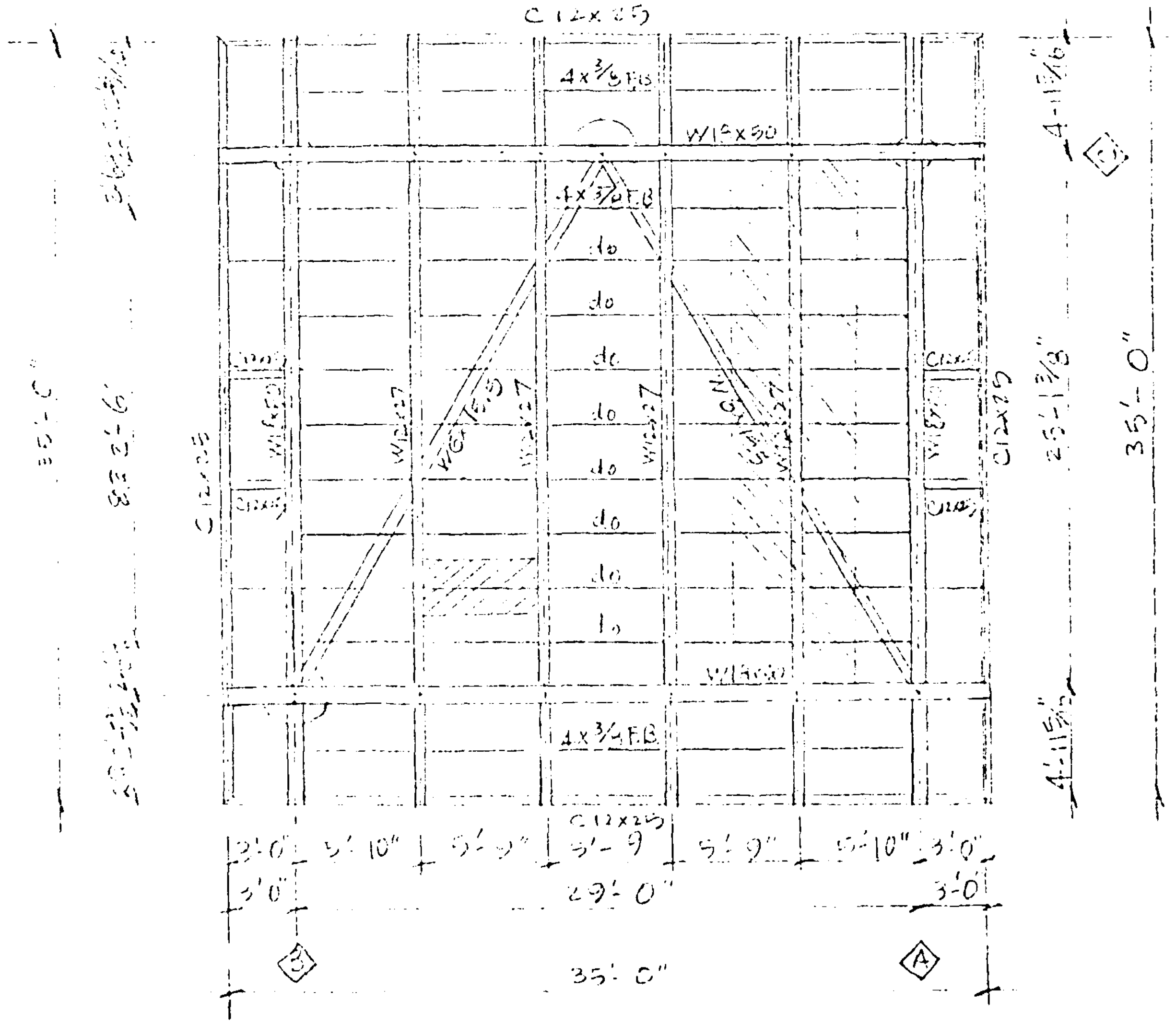
Sheet 192 of 27

By C. Chou Client U.S. NAVY Subject Structural Comp. - A Frame
Date 4-2-84 Job No. 87-711 Calculation Beam Loading Criteria

Live Load on Top Deck

Design Load (Uniform) = 100 PSF

SCALE 1/3" = 1'-0"



CREST OFFSHORE, INC.

Sheet [illegible] of 27

By [illegible] Client U.S. NAVY Subject Structural Concept [illegible]
Date 4-9-76 Job No. [illegible] Calculation [illegible] Conditions

Check Beam W12x27

Span $l = 25'-0"$

Tributary Area $A = 5.75 \times 25 = 143.75$ SQ. FT

Live Load $W_{LL} = 100 \times 143.75 = 14{,}375^{\#}$

1/4" Plate $W_{DL1} = 10.2 \times 143.75 = 1466^{\#}$

W12x27 $W_{DL2} = 27 \times 25 = 675^{\#}$

Total $= 16516^{\#}$

$w = 660^{\#}/ft$

Max. Mom. $M = \frac{wl^2}{8} = \frac{0.66 \times 25^2 \times 12}{8} = 618.75^{\text{"K}}$

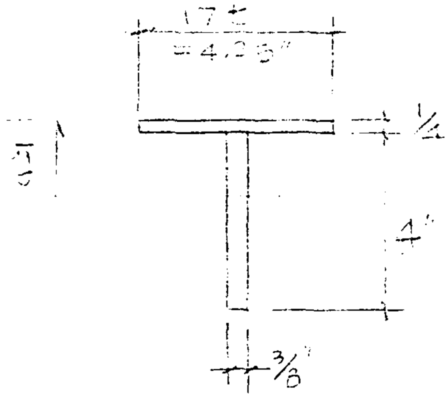
W12x27 $S_x = 34.1$ in^3

Max. Stress $\sigma = \frac{618.75}{34.1} = 18.1$ KSI < 22 KSI

O.K.

Check 4 × 3/8 Flat Bars

Effective width $b = 17t = 17 \times 1/4 = 4.25"$



Span $l = 5'\text{-}9"$

Tributary Area $= 5.75 \times 2.5 = 14.4^{\square'}$

Live Load $W_{LL} = 100 \times 14.4 = 1440^{\#}$

1/4" PL $W_{DL} = 10.2 \times 14.4 = 147^{\#}$

4×3/8" F.B. $W_{DL} = 5.10 \times 5.75 = 29^{\#}$

Total $1616^{\#}$

$w = 281\ ^{\#}/_{ft}$

Max. Mom. $M = \dfrac{.281 \times 5.75^2 \times 12}{8} = 13.9\ ^{"K}$

$\bar{y} = \dfrac{.25 \times 4.25 \times .125 + .375 \times 4 \times 2.25}{.25 \times 4.25 + .375 \times 4} = \dfrac{3.51}{2.70} = 1.3"$

$I = \frac{1}{12} \times \frac{3}{8} \times 4^3 + \frac{3}{8} \times 4 \times (2 - 1.05)^2 + 4.25 \times \frac{1}{4} \times (1.3 - 0.125)^2$

$= 2 + 1.354 + 1.467$

$= 4.821 \text{ in}^4$

$S = \dfrac{4.821}{4 - (1.3 - .25)} = 1.634 \text{ in}^3$

Max. Tensile Stress $f_t = \dfrac{13.9}{1.634} = 8.51^{ksi} < 22^{ksi}$

O.K.

CREST OFFSHORE, INC.

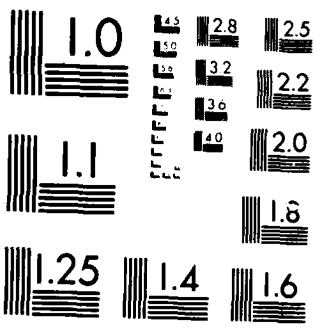
By C.C. Lin Client U.S. NAVY Subject [illegible] Concept Analysis Sheet [illegible] of 27
Date April [illegible] Job No. 27-[illegible] Calculation Basic Loading Conditions

9.3 WIND LOADS

Set forth herein is the basic wind load data for the input into SEALOAD-2 computer program. The computer program print-outs is presented in A.4 Wave and Wind Loads of APPENDIX A.

AD-A164 421 STRUCTURAL CONCEPT ANALYSIS REPORT FOR THE EAST COAST AIR COMBAT MANEUVER..(U) CREST ENGINEERING INC TULSA OK MAY 76 27-771-92-APP-C CHES/NAVFAC-FPO-7601-APP-C 3/7

UNCLASSIFIED N62477-76-C-0179 F/G 13/13 NL



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

CREST OFFSHORE, INC.

Sheet [illegible] of [illegible]

By [illegible] Client [illegible] Subject [illegible]
Date [illegible] Job No [illegible] Calculation [illegible]

* Ref: Notes from Steve Pitts, 12-14-72

WIND FORCES

$$F = 0.00256 \; C_s \; A \; C_H \; V^2$$

F = force in lbs.
V = velocity @ 30 ft elev. = 150 knots = 173 mph
C_s = 1.5 for flat surfaces
= 1.0 for cyl. surfaces
A = projected area of surface (sq ft)
C_H = height coeff = $(H/30)^{2/7}$

Calculate psf wind force on flat surfaces:

F/A @ 30 ft elev = $(.00256)(1.5)(1)(173)^2$ = 115 psf

F/A @ 75 ft elev = $(115)(75/30)^{2/7}$ = 115 (1.3) = 150 psf

For cylindrical members.

F/A @ 30 ft = 77 psf
F/A @ 75 ft = 100 psf

{ Elev referenced to MLW }

CREST OFFSHORE, INC.

Sheet [illegible] of [illegible]

By [illegible] Chkd [illegible] Subject [illegible]
Date [illegible] Job No [illegible] Calculation [illegible]

Wind Force Area Calc:

1 Wind pressure = 150 psf (Flat)
100 psf (cylindrical)

2 Assume:
A. Projected Area Above top deck due to fence = 45' w x 2' h.

B. Area from top of top deck to bottom of lower deck is solid plate

Calculations

F (top deck) = 45 x 2 x .150 = 13.5^K

F (between decks) = [illegible] x [illegible] x .15 = 55.7

Stairways & Landing =

Landings (12' x 2' x .15) = 4.8
Stairs: (21 x 2 x .15) = 6.3

Antennas 2.0

82.3^K

If wind is at 45° to structure axis

Wind Force on each Face:

Top deck = (.707) (13.5) = 9.55^K

lower deck = (.707) (82.3 - 13.5) = 48.8^K

Wind Area & Area Vertical Centroid Location

Segment #1
Projected Area of top deck and [illegible]

$A_1 = 45 \times 2 = 90$ sq. FT
(width)x(Height)

Centroid from mudline = 159 ft

Segment #2
$\frac{2}{3}$ Area between top deck and equipment deck is a solid plate

$A_2 = \frac{2}{3}(29 \times 15) = 290$ sq. FT

Centroid from mudline = 159 − 10 = 149.0 ft

CREST OFFSHORE, INC.

Sheet [illegible] of 27

By [illegible] Client [illegible] Subject [illegible]

Date [illegible] Job No. [illegible] Calculation [illegible]

9.6 WAVE LOADS

Wave loads distributions are generated through the SEALOAD-2 computer program. [illegible] input/output are presented in A.4 [illegible] Wave Loads in APPENDIX A.

Design wave characteristics was presented in Sec. 1.2, Design Criteria.

SECTION 10

SPACE FRAME ANALYSIS

10.1 INTRODUCTION

The three-pile structure in this section has satisfied the preliminary design procedures described previously (from SECTION 2 to SECTION 9). The main objective of the space frame analysis is to confirm the integrity of the proposed structure subjected to specified environmental conditions.

The space frame analysis set forth herein utilizes the available computer programs available at Synercom Technology, Inc., Houston, Texas. The program processing procedures are as follows:

(1) Set up SEALOAD-2 program to obtain desired wind, wave and dead weight (including buoyancy effect) loadings on the structural components.

(2) Update loadings in Step (1) due to additional dead weight and live loads on the structure.

(3) Perform space frame analysis by using STRAN computer program.

The program printouts are presented in A.5 Space Frame Analysis in APPENDIX A.

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Sheet [illegible] of [illegible]

By [illegible] Client U.S. [illegible] Subject [illegible] Final Concept [illegible]

Date [illegible] Job No. [illegible] Calculation Spill [illegible] Analysis

10.2 INPUT DATA

1. SEADYN Program will calculate wind and wave, dead [illegible] adjusted by the buoyancy effect.

* 2. Additional wind and wave forces due to boat landings and stairways --- input as joint loads

** 3. Additional dry weight of the superstructure:

a. Secondary deck beams (joists)

b. Floor plates

c. Handrails, kickplates, safety nets, etc.

input as joint loads

** 4. Live loads on top deck and equip. at deck

Loading Number Designation :

Loading 1 Wind And Wave (90° Approaching from + X-Axis) (Jacket & Superstructure)

Loading 2 Wind And Wave (270° Approaching from + X-Axis) (Jacket & Superstructure)

Loading 3 Dead Loads (Dry Weight + Buoyancy)

*Loading 4 Additional Wind and Wave (Boat Landing & Stairs) + Y-axis

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Sheet [illegible] of [illegible]

By [illegible] Client [illegible] Subject [illegible]

Date [illegible] Job No. [illegible] Calculation [illegible] Frame Analysis

** Loading 5 Additional Dead Loads ([illegible])

** Loading 6 Live Loads

Loading 7 Combined Loads (= (2 – 4) + (3 + [illegible])) Max. Te[illegible]

Loading 8 Combined Loads (= (1 + 4) + (3 + 5) + 6) Max. Comp[illegible]

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By Client Subject Calculation
Date Job No.

Load No. 4 Additional Wind Load From Boat Landing & Stairs

(1) Boat Landing   Mom at Mudline = 4 206 FT-KIPS

Shear = 48.4 KIPS

Equivalent Conc. Loads at

$$Z = \frac{4206}{48.4} = 86.9 \text{ FT from mudline}$$

Equally distributed at

Members

$l = 96 - 73 = 13'$

$l_p = 86.9 - 73 = 8.9'$

(2) Stairways   Mom at Mudline = 10,123 FT-KIPS

Shear = 31.2 KIPS

Equivalent Conc. Loads at

$$Z = \frac{10\,123}{31.2} = 124.7 \text{ FT from mudline}$$

Equally distributed at

Members ⑤③ — ⑤⑤ $l = 129 - 100.5 = 28.5'$

⑤④ — ⑤⑥ $l_p = 124.7 - 100.5 = 24.2'$

Loading 3 [illegible] Dead Loads

[illegible] Deck:

1/4" PL	5,100#
[illegible]	4,320#
[illegible]	2,000#
	11,420#

Uniformly distributed on Beams

Members 61 — 62, 62 — 63, 63 — 64, 64 — 65, [illegible] — [illegible], 67 — 69, 67 — 61

$$w = \frac{11,420}{(1000) \times 3 \times 27}$$

$$= 0.13 \text{ KIP/FT}$$

Top Deck:

1/4" PL	12,495#
4"x3/8" F.B.	1,684#
W12x27	3,730#
C12x25	3,800#
	21,795#
Safety Nets	2,000#
	23,795#

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Sheet [illegible] of [illegible]

By C. Chen Client [illegible] Subject Structural [illegible]
Date [illegible] Job No. [illegible] Calculation [illegible]

Equally distributed at 3 leg tops : 2.25 kips

LOADING 6 LIVE LOADS

Equipment Deck : 150 PSF

Total Live Load = 150 × 20 × 25 = 75000#

Uniformly distributed on Beams

Member 31 – [illegible] 33 – 37 $w = \frac{75000}{1000 \times 3 \times [illegible]}$

[illegible] – [illegible] 37 – [illegible]

[illegible] – [illegible] 35 – 61 $= 0.86$ KIPS/FT

64 – [illegible]

Top Deck : 100 PSF

Total Live Load = 100 × 35 × 35 = 122,500#

Equally distributed at 3 leg tops : 40.83 KIPS

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Sheet [illegible] of [illegible]

By [illegible] Client [illegible] Subject [illegible] Concept [illegible]

Date [illegible] Job No [illegible] Calculation [illegible]

Revised Coordinates for [illegible] ①, ② & ③

[illegible] ① $x =$ [illegible] $+ \frac{[illegible]}{6}$ [illegible] $= 29.37$

$y = -$[illegible]$ - \frac{[illegible]}{6}$ [illegible] $= -17.25$

$z = -$[illegible]

[illegible] ② $x = -29.$[illegible]

$y =$ [illegible]

$z = -6.$[illegible]

[illegible] ③ $x =$ [illegible]

$y =$ [illegible]$ + \frac{106.5}{6} = 34.4$[illegible]

$z = -6.$[illegible]

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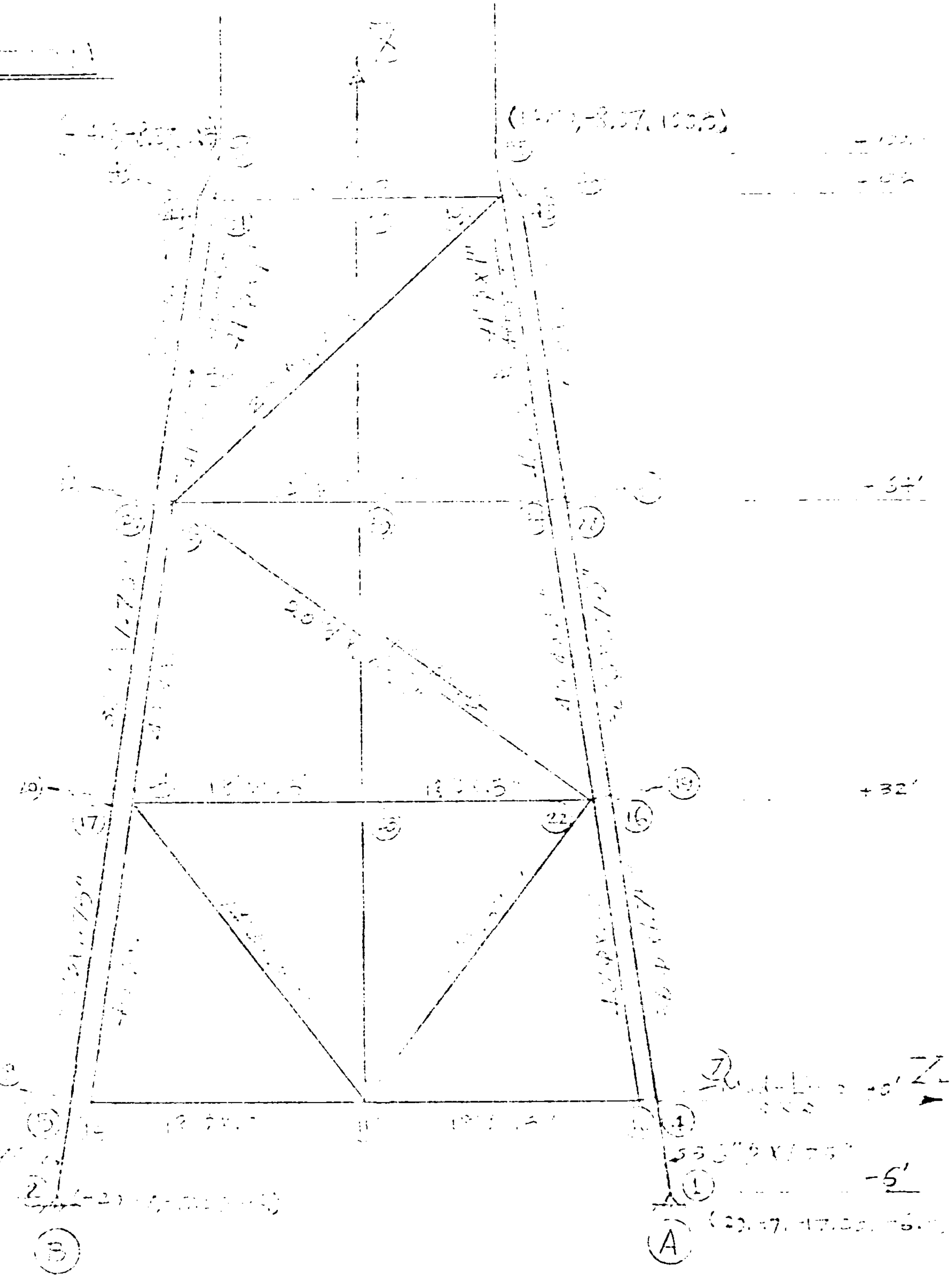

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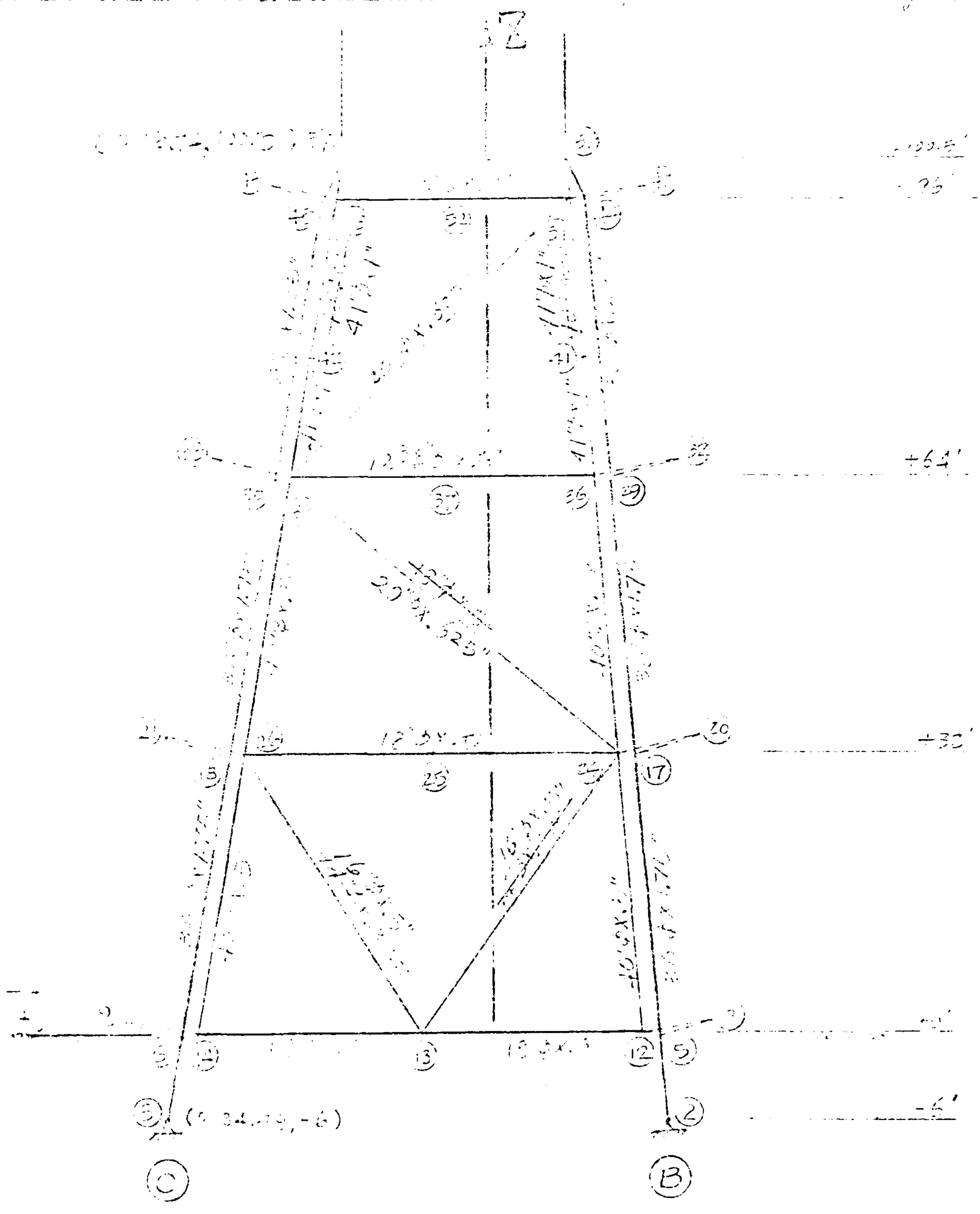
Sheet ___ of ___

Object Structural Concept Analysis

Calculation Space Frame Analysis

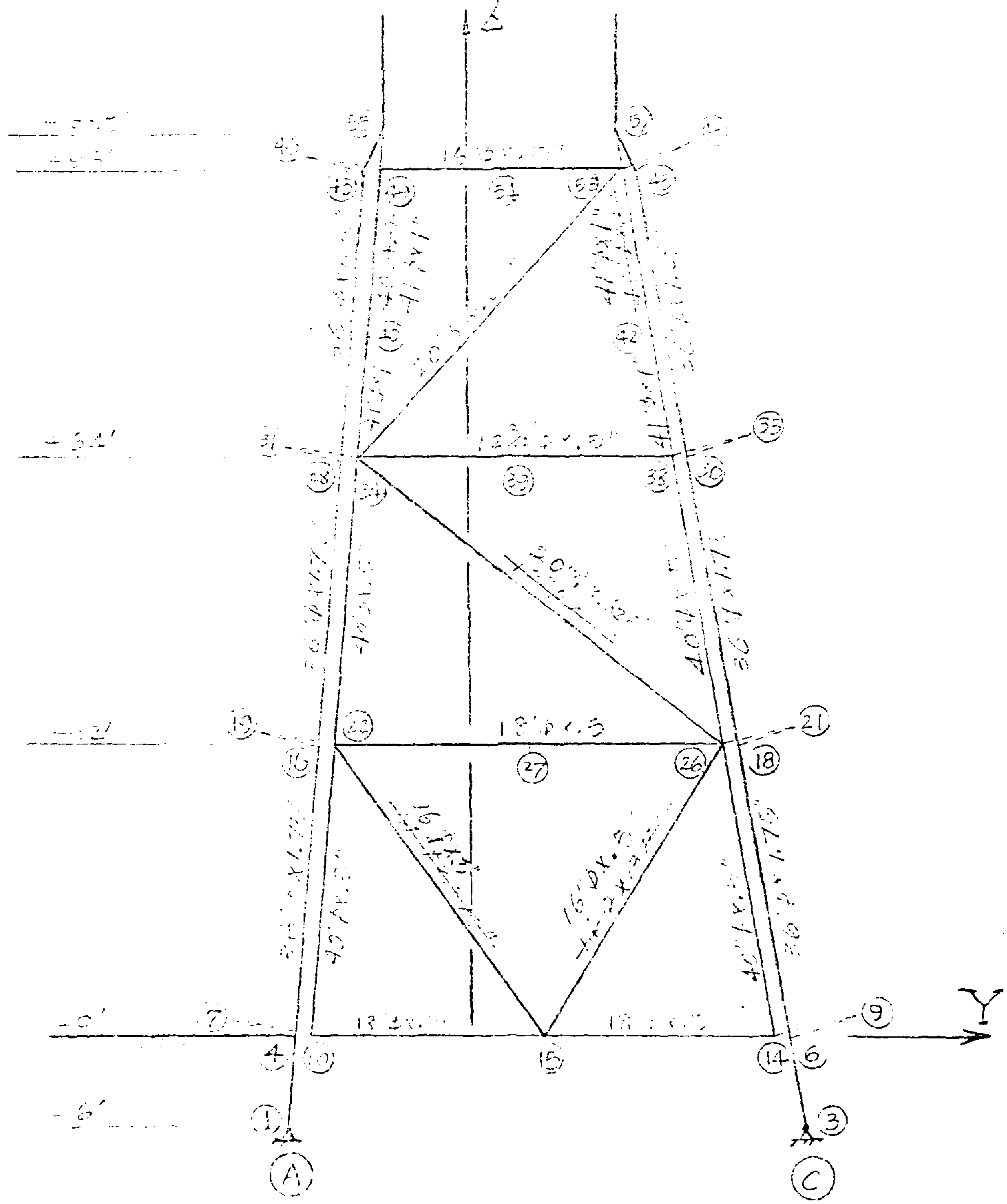


CREST OFFSHORE, INC.

Sheet ___ of ___

By ___ Client U.S. NAVY ___ Subject ___

Date ___ Job No. ___ Calculation ___



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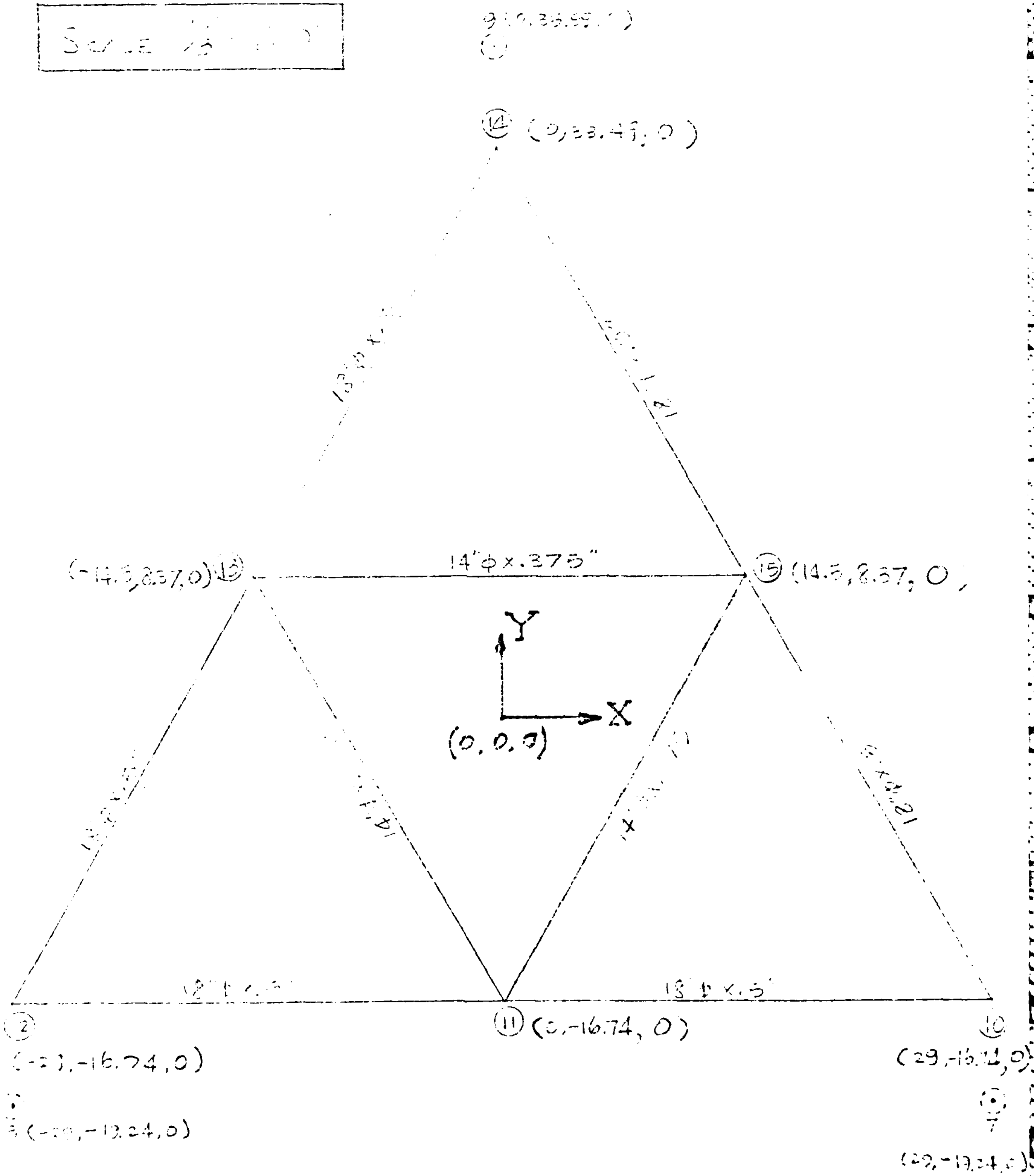
Sheet [illegible]

By [illegible] Client [illegible] Subject Structural Concept Analysis

Date [illegible] Job No. [illegible] Calculation Space Frame Analysis

PLAN

Scale [illegible]



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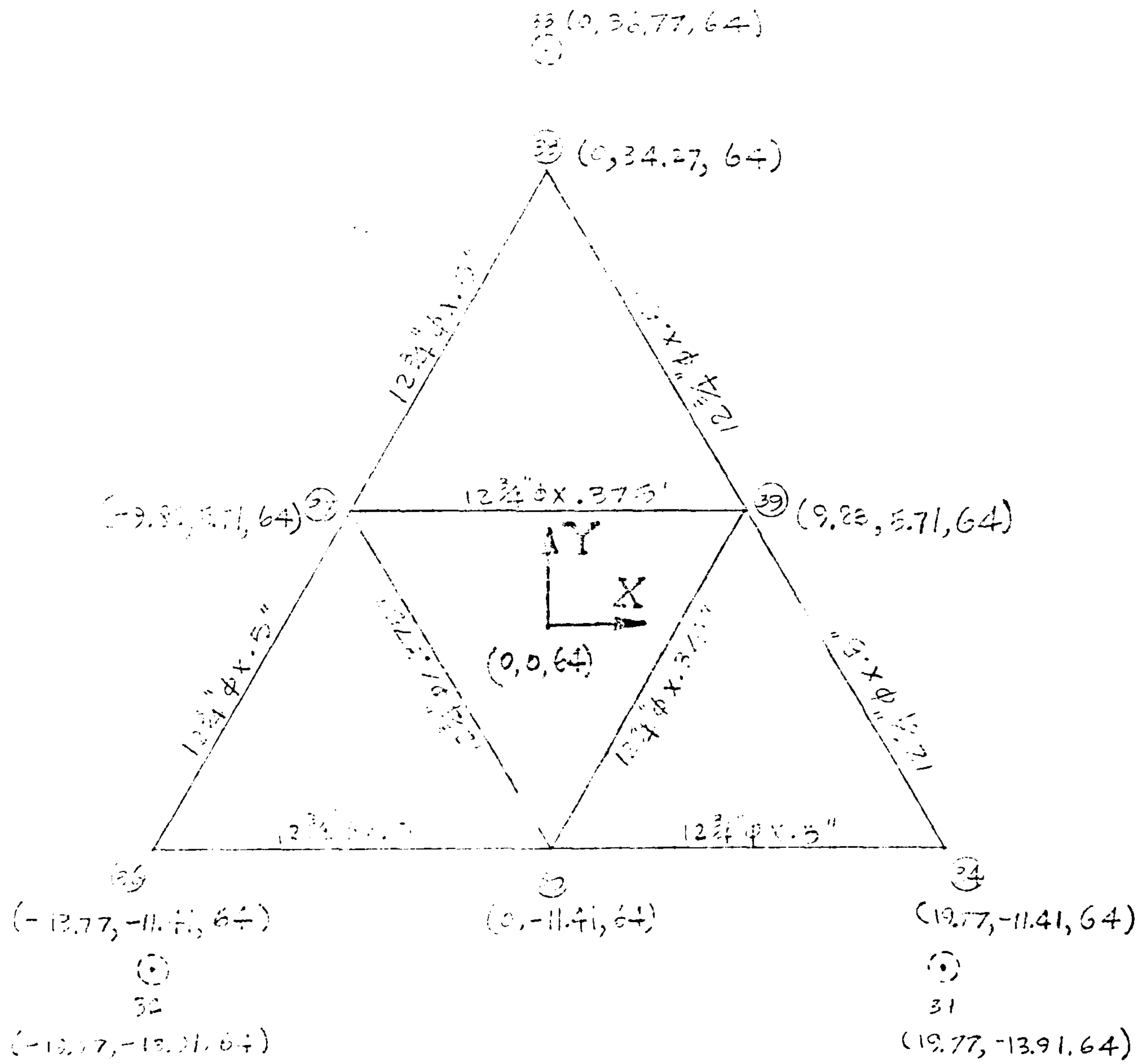
Sheet 12-13 of 22

Subject Structural Concept Analysis

Calculation Space Frame Analysis

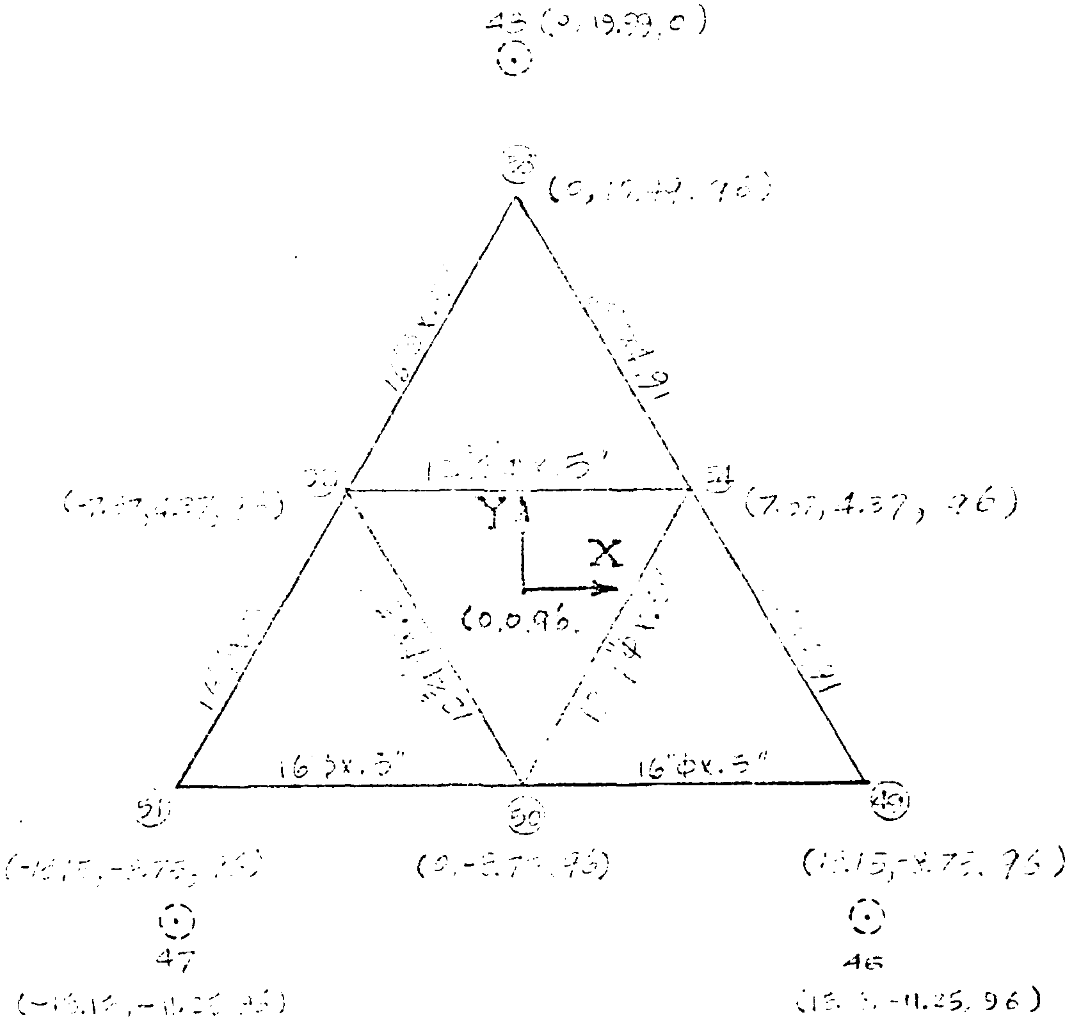


CREST OFFSHORE, INC.

Sheet ___ of ___

By ___ Client ___ Subject ___

Date ___ Job No ___ Calculation ___

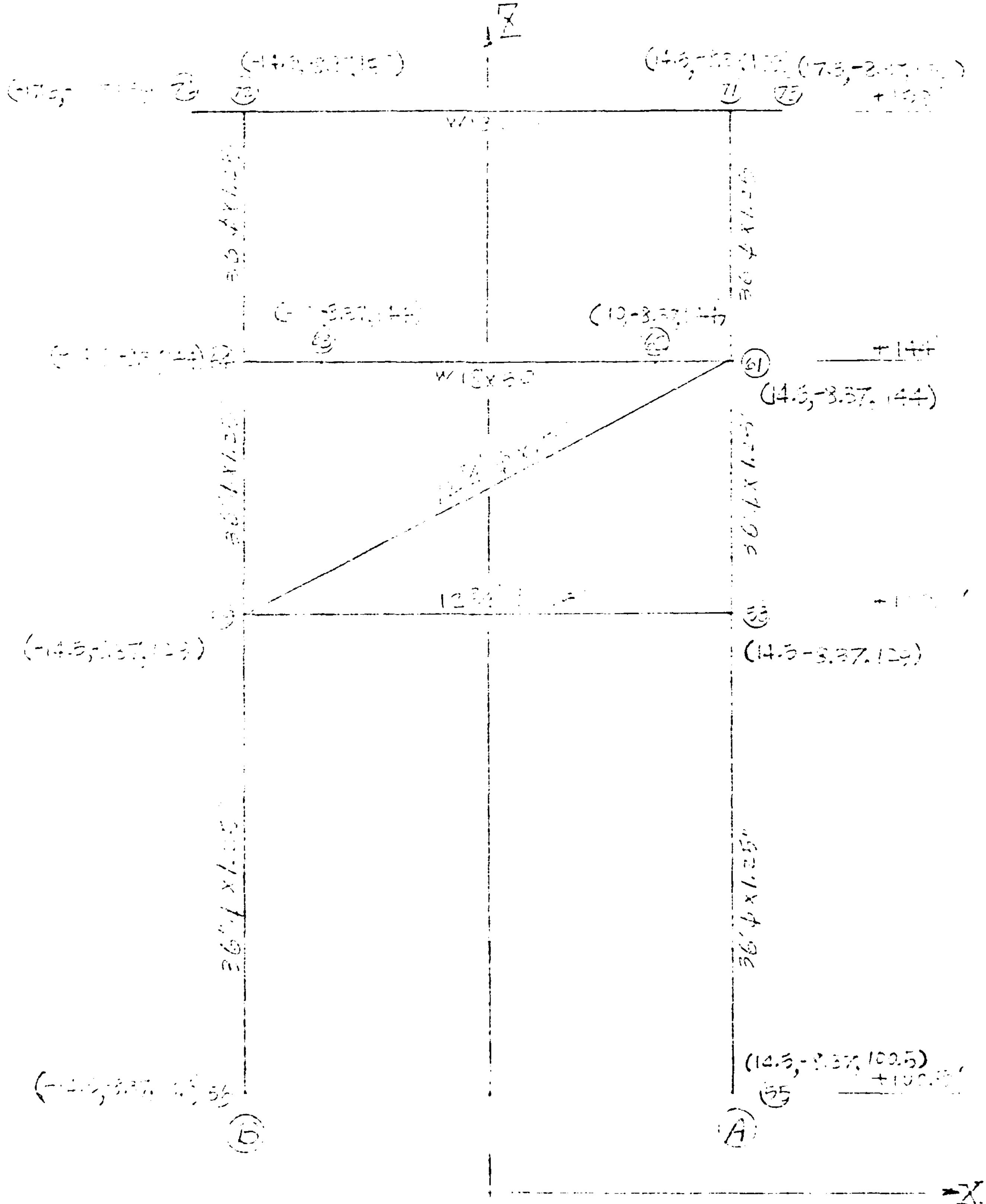


CREST OFFSHORE, INC.

Sheet [illegible] of 22

Client [illegible] Subject Structural Concept Analysis

Date [illegible] Job No [illegible] Calculation Space Frame Analysis



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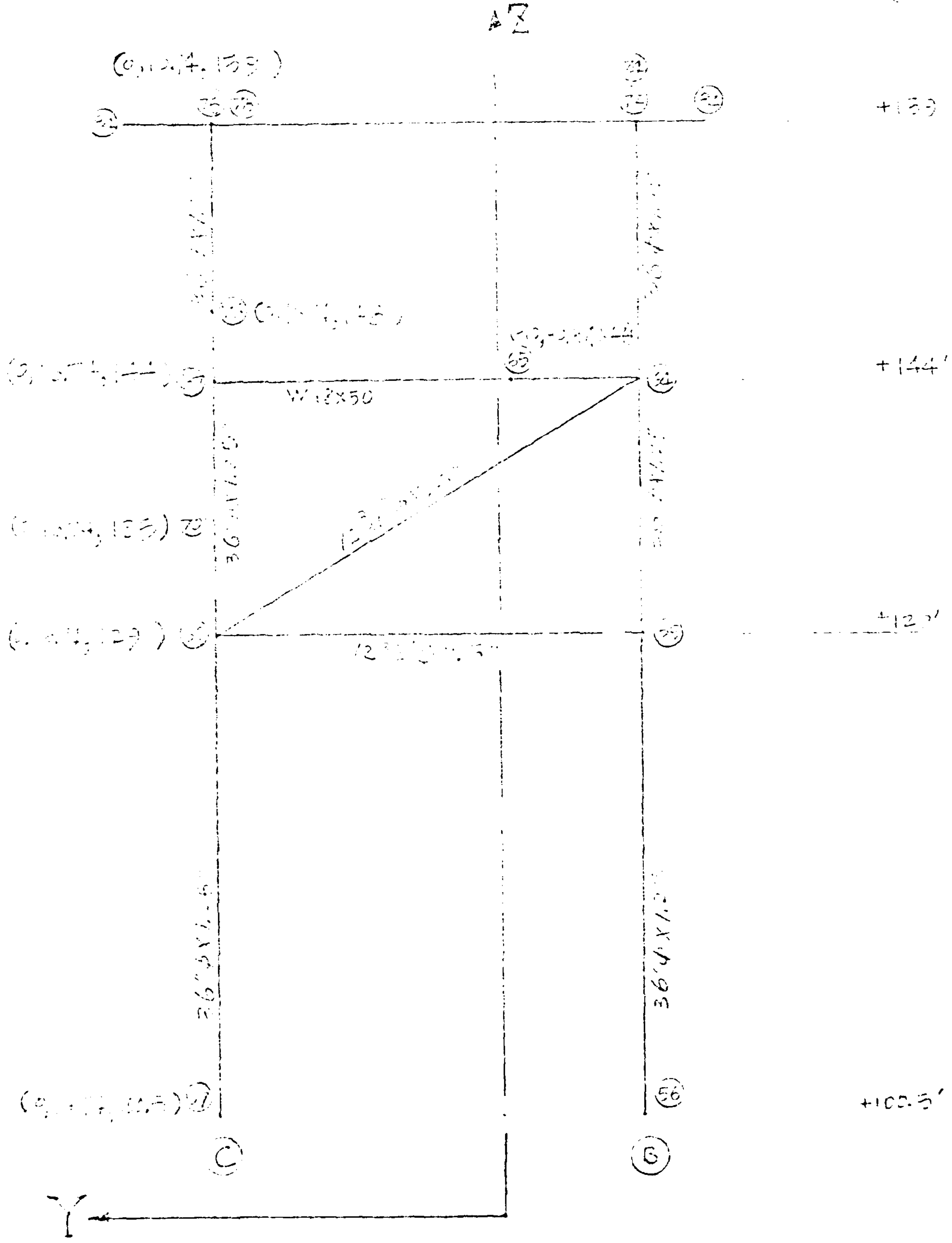
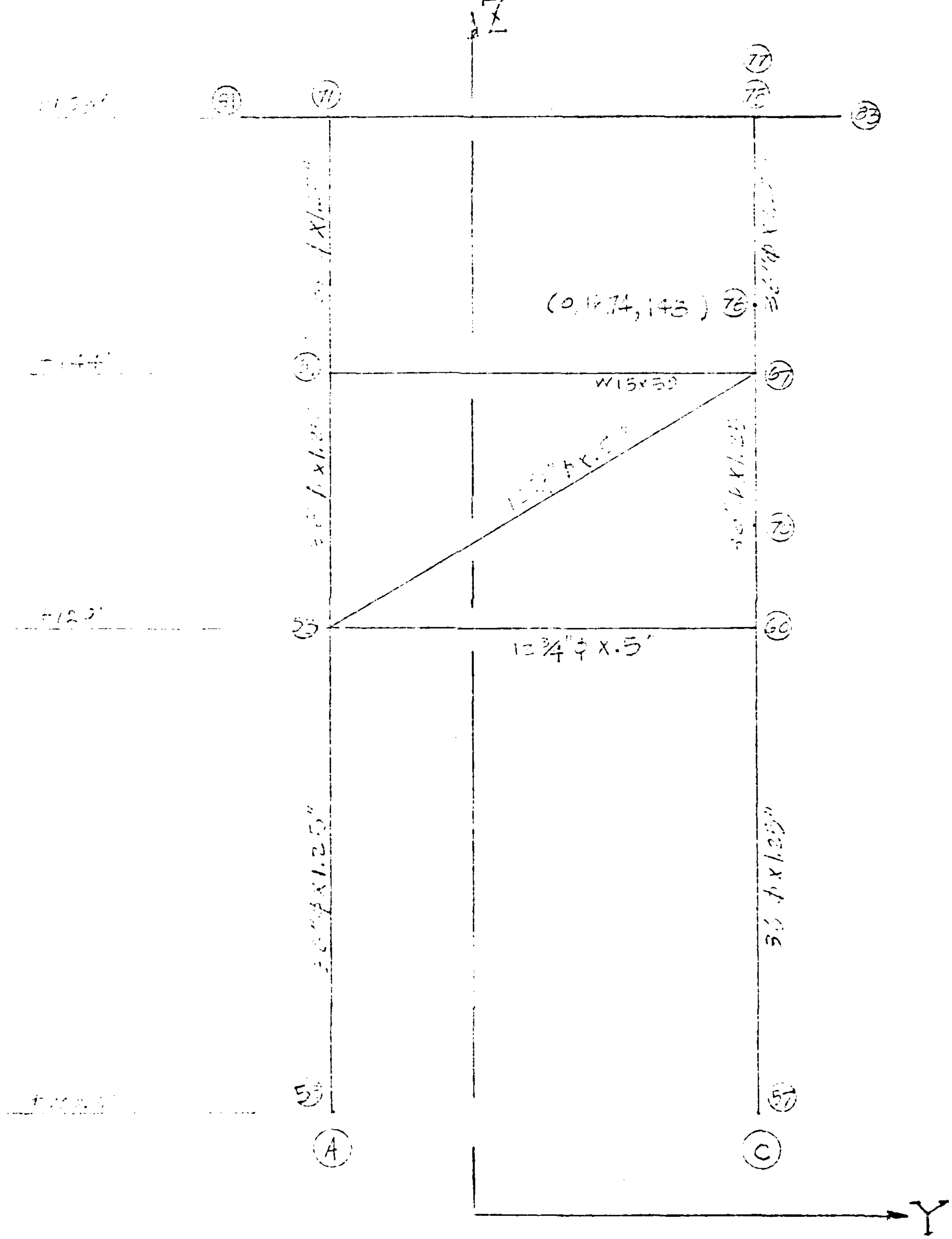
By [illegible] Client U.S. NAVY Subject Structural Concept Analysis Sheet [illegible] of [illegible]
Date [illegible] Job No [illegible] Calculation [illegible]



By Client U.S. NAVY Subject
Date Job No. Calculation Space Frame Analysis

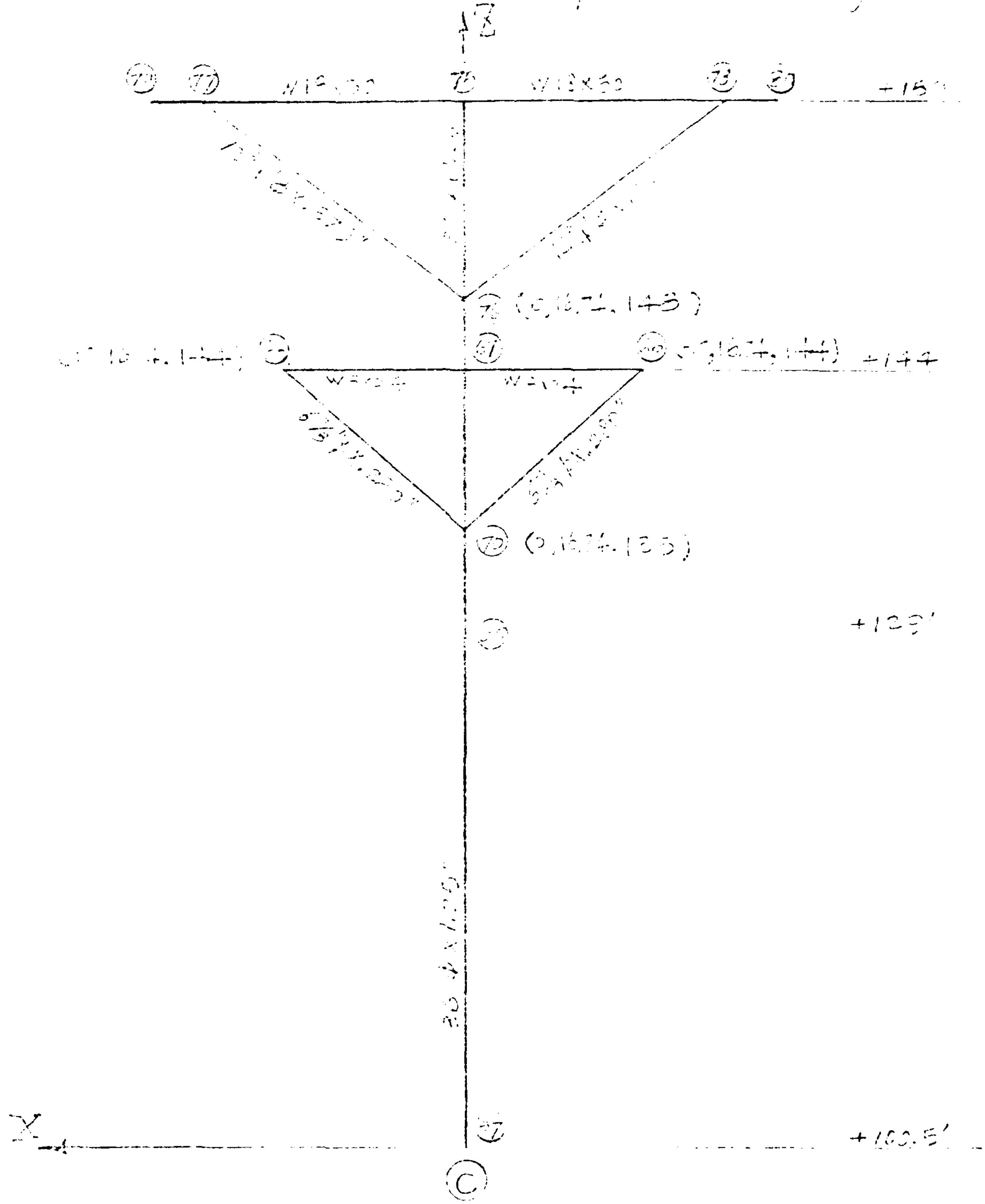


CREST OFFSHORE, INC.

Sheet ___ of ___

By ___ Client ___ Subject ___

Date ___ Job No ___ Calculation ___



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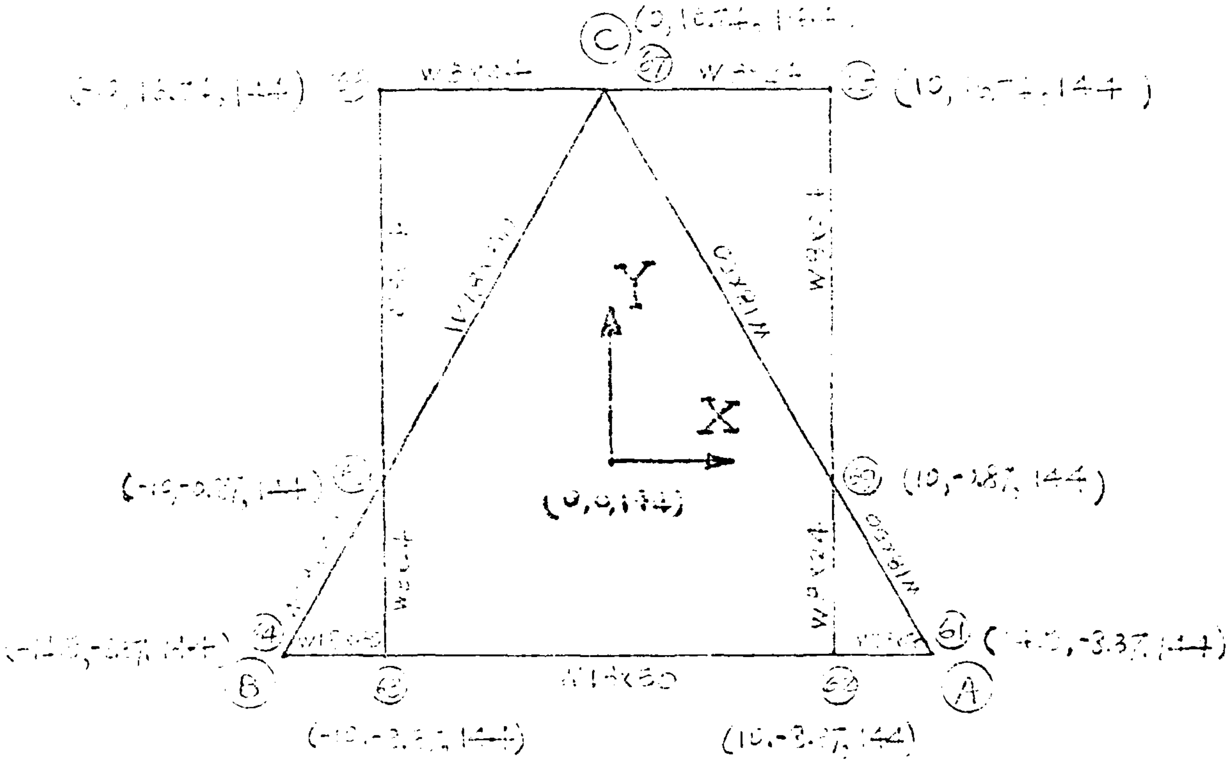
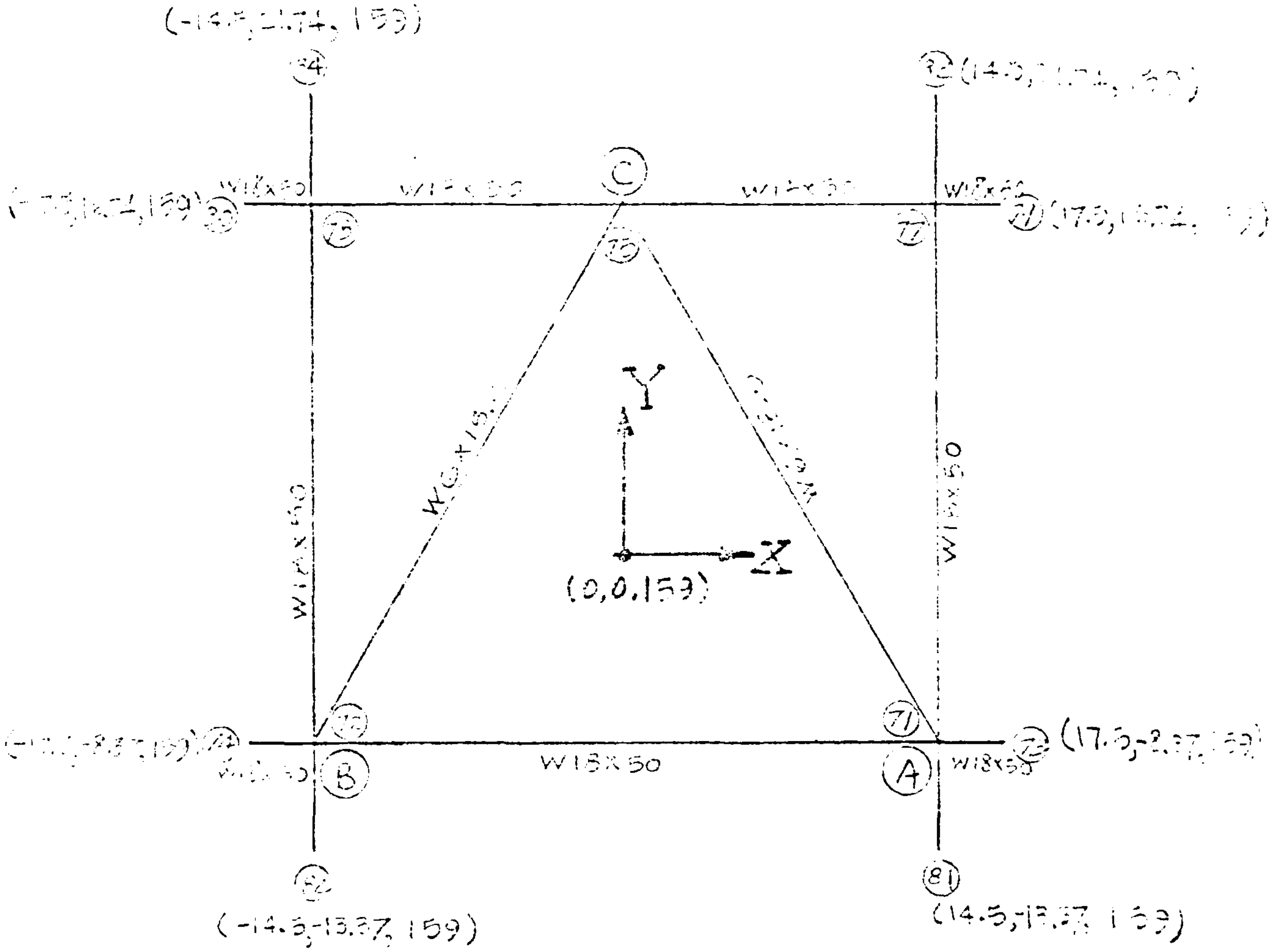
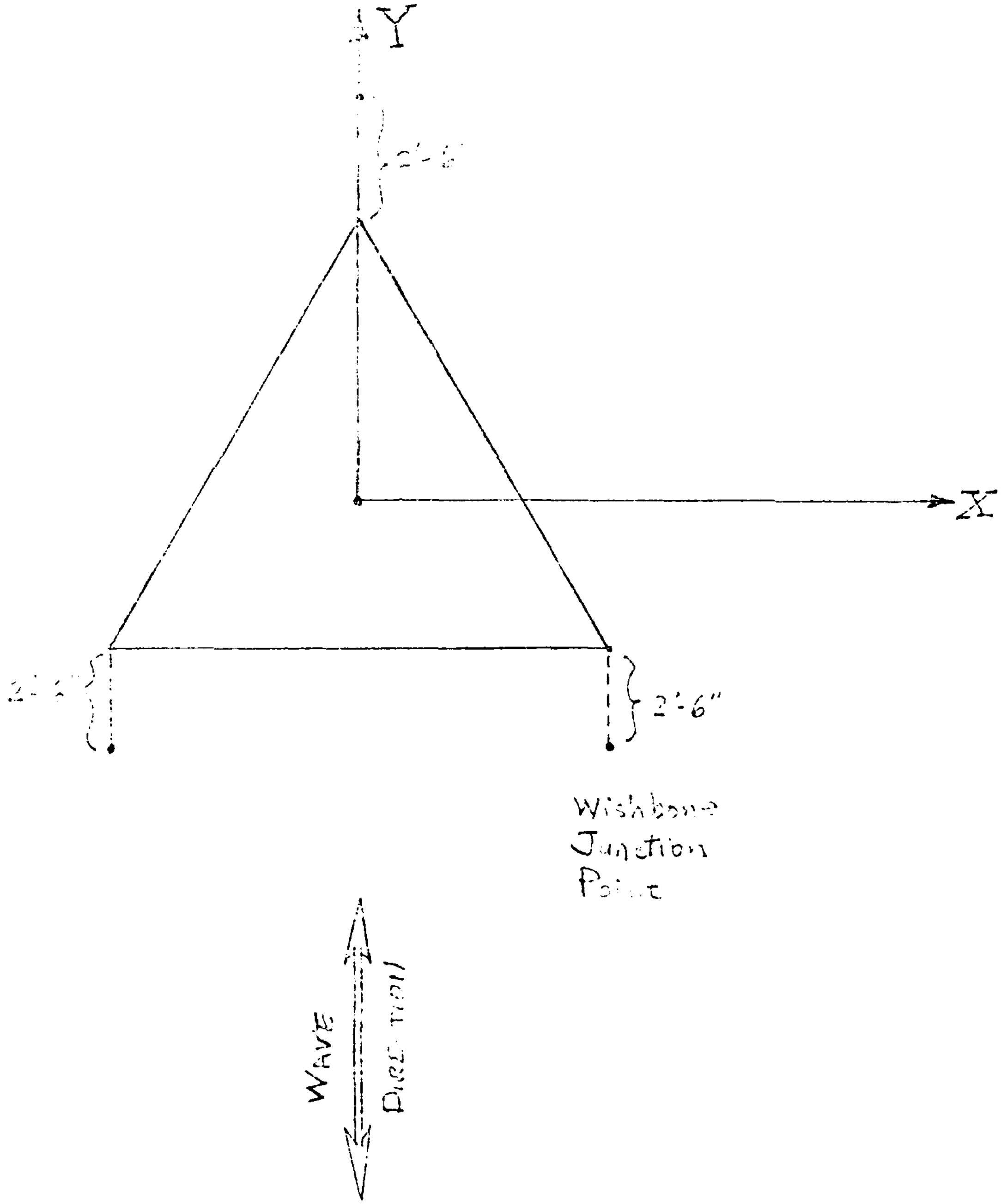



(-14.5, 21.74, 159)
34
32
(14.5, 21.74, 159)
W18x50
W18x50
C
W18x50
W18x50
33
73
75
77
31
(17.5, 18.74, 159)
W6x15.5
W18x50
W18x50
Y
X
(0,0,159)
74
76
71
72
(17.5, -8.37, 159)
W18x50
B
W18x50
A
W18x50
82
81
(-14.5, -13.37, 159)
(14.5, -13.37, 159)

By [illegible] Client [illegible] Subject [illegible]

Date [illegible] Job No. [illegible] Calculation [illegible]

Joint Coordinates for Wishbone Junction Points



10.3 RESULTS OF ANALYSIS

(i) Loads on Piling

Maximum Tension Force = 1450 Kips

Maximum Compressive Force = 1500 Kips

According to Pile Capacity Curves shown on Page 3.8) for 36" O.D. pipe piles, the proposed 180 ft of penetration is acceptable.

(ii) Member Stresses

Stresses on each structural component are in acceptable range under designed environmental Conditions.

(iii) Deflections

The maximum deflection at the top deck (EL.+75'-0" from MLW) is at 6.8 inches under most critical environmental conditions.

SECTION 11

CORROSION PROTECTION

11.1 INTRODUCTION

API Recommendations for corrosion protection serve as the base for selecting the protection methods in this section.

CREST OFFSHORE, INC.

Sheet 4-22 of 10

By ______ Client ______ Subject ______ Concept Feasibility

Date ______ Job No ______ Calculation Corrosion Protection

11.2 API RECOMMENDATIONS

CORROSION PROTECTION

2.42 **Zone Definition.** The surface area of a platform is divided into three zones for corrosion protection considerations. These zones are:

a. *Splash Zone.* That area extending 6 feet above high lunar tide to 4 feet below low lunar tide.

b. *Atmospheric Zone.* That area above the splash zone.

c. *Submerged Zone.* That area below the splash zone.

2.43 **Protection in Splash Zone.** The splash zone area shall be protected by one of the following methods:

a. Extra steel in excess of that needed for strength.

b. *Noncorrosive metallic wrap.*

c. Coatings.

2.44 **Protection in Atmospheric Zone.** All steel surfaces in the atmospheric zone should be protected against corrosion. Proper surface preparation and application of materials selected will prove most economical. Various paint systems and galvanizing have proved satisfactory. Application procedures should follow the manufacturer's recommendations closely.

2.45 **Protection in the Submerged and Buried Zones.** One of the following modes of cathodic protection should be used to protect the structure in the submerged zone:

a. Sacrificial anodes.

b. Impressed current.

2.46 **Selection of Method to be Used.** Either of the systems (or their combination), if properly designed, installed, and maintained will satisfactorily protect the submerged portion of the platform. The proper selection will depend upon due consideration of the requirements imposed by the size of the platform, water depth, connecting pipe lines, availability or nature of electric power, and personnel assignments. Sacrificial anodes may add a significant amount of weight to the structure which must be considered when designing for launching and installation. For impressed current systems, qualified personnel are required to monitor and maintain the system continually, and a continuous source of electrical power is required from the beginning to develop initial polarity and prevent corrosion.

2.47 **Current Requirements.** The corrosivity of the environment and the current required to achieve complete protection depend on the environmental variables which affect oxygen availability at the steel surface. The most important variables are: (1) water velocity, (2) water depth, (3) water temperature and salinity, and (4) the ability to deposit calcareous deposits on the surface.

The initial minimum current densities recommended for the submerged zone (the total exposed area between the water surface and the bottom) are:

Area	Current Density mA/ft²
Gulf of Mexico	5-6
West Coast of United States	7-8
Cook Inlet	35-40

These values are adequate if the anodes are properly distributed throughout the submerged zone, and this can generally be achieved with sacrificial anodes. Since the output of impressed current anodes is much higher and their number is less, the distribution is less efficient and these values should be increased by a factor of 1.25-2.0.

In addition to the above, current should be applied for protection of the steel in the soil. The requirement for the soil zone (the total exposed area of the jacket, piles and drive pipe in the soil) is 1-2 mA/ft². The well casing should be protected with the application of an additional 3 amperes per well. Due consideration should be given to the effect of connecting pipelines and risers to the platform.

2.13 System Design

a. Sacrificial Anodes. The design of a sacrificial system involves establishing the total weight of alloy required and a distribution which will effectively disburse the current throughout the area to be protected.

1. Total Weight

$$W_t = \frac{I \times N \times 8760}{C}$$

where:

W_t = Total weight of alloy (lbs)

I = Total current requirement (amps)

N = Desired life (years)

C = Capacity of alloy $\frac{\text{amp-hrs}}{\text{lb}}$

Capacities of some of the more common alloys at loadings of 200-700 mA/ft² are:

Alloy	C
Zinc (Mil-A-18001H)	370
Aluminum-Zinc-Mercury	1250-1290
Aluminum-Zinc-Indium	760-870
Aluminum-Zinc-Tin	420-1180

The differences shown within any one grouping are attributed to variations in both composition and heat treatment offered by the various suppliers.

Note: The anode selected should have a minimum closed circuit driving voltage of 1100 mv.

2. Anode Configuration. Neglecting the effects of any corrosion products, the current which an anode can deliver is a function of the anode/electrolyte resistance, R_a, and the potential difference between the anode and cathode, E. R_a can be determined from a modification of Dwight's formula:

$$R_a = \frac{0.0626\,\rho\,(\ln \frac{4L}{r} - 1.0)}{L}$$

where:

L = length of anode (inches)

r = equivalent radius (inches)

ρ = resistivity of electrolyte (ohm-cm) at the anticipated water temperature

For other than cylindrical anode shapes:

$$r = \sqrt{\frac{\text{cross sectional area}}{\pi}}$$

A weight/anode configuration relationship should be selected which will permit the sacrificial alloy to be consumed over the desired life. This can be expressed as:

$$N = \frac{C \times W_t}{8760 \times E/R_a}$$

It is customary to assume E = 0.250V and to calculate R_a based on the dimensions of the anode at 40% consumption.

3. Location. The anodes should be positioned throughout the platform in relation to the area of steel to be protected. Since the efficiency of most sacrificial alloys is adversely affected when covered with mud, attachment of anodes to structural members at the mud line should be avoided.

4. Method of Attachment. Anodes may be welded to structural members using standoffs or flush-type pads. If the standoff method is used, a minimum of 12 inches between the anode and adjacent steel should be allowed, and the connections should be designed to withstand the installation loads caused by launching and pile driving and the environmental loads during the life of the anode. The flush-type anode should incorporate a dielectric shield which extends a minimum of 12 inches outward from the perimeter. Tack welding or set screws may be used to establish electrical continuity if a clamp-type connection is used.

b. Impressed Current. The design of an impressed current system involves selecting the anode material, determining the optimum methods of attaching the anodes to the structure, and assuring the reliability of associated electrical hardware (rectifiers, anode lead wire, etc.).

1. Anodes. Unless the system is designed for replacement, the anode material must function for the expected life of the structure. Some materials used at this time and pertinent properties are listed in the following table:

Material	Rate of consumption, lb/A yr	Max. Current Density, A/ft²	Maximum Potential, Volts
Lead silver alloy	0.1-0.2	15-20	100 +
Lead w/ platinum pins	0.003	15-20	100 +
Platinum over Titanium	0.000013	100 +	8
Platinum over Niobium	0.000013	100 +	40-50
Platinum over Tantalum	0.000013	100 +	200

2. Method of Attachment. Impressed current anodes may be permanently fixed to the structure during construction, run through protective conduits which are installed in the fabrication yard, suspended by their lead wire or by a plastic rope supported on a shielding composition fitting which is screwed or flanged to the protective conduit, or mounted on bottom-supported sleds. The installation must be designed to withstand the environmental forces as well as the

special conditions imposed by high electrical potentials and currents. Dielectric shielding material which can withstand the caustic/chlorine, high current density environment should be used as a barrier on the steel adjacent to the anode to prevent maldistribution of the protective current.

3. Placement of Anodes. The anodes should be positioned so that all portions of the structure are adequately protected. With the smaller output anodes (30-50 amperes) current "throw" is in the range of 25 to 50 feet while a projection of 60 to 70 feet is possible with the 200 ampere anodes if properly shielded.

4. Conductor. If oil-immersed rectifiers are used, cross-linked polyethylene (XLP) insulated conductors should be specified, because it will not deteriorate on contact with transformer oil.

5. Rectifier. The rectifier(s) should be sized to deliver the anticipated current output of the anodes; however, some oversizing of the rectifier to permit higher current densities during polarization may be desirable. The rectifier voltage should be adequate to overcome the resistance of platform wiring and anode lead, the anode/electrolyte resistance and the back EMF of the anode.

2.49 **Monitoring.** Potential surveys should be conducted periodically to assure that the structure is adequately protected. A potential of -0.85 volts with reference to a $Cu/CuSO_4$ electrode (-0.80 volts $Ag/AgCl$ or $+0.25$ volts to zinc) is the accepted criterion for protection. The reference cell should be relatively close to the protected steel when the measurements are made. Permanent zinc or $Ag/AgCl$ reference cells can be installed, but polarization of such cells should be checked. Rectifier outputs on impressed current systems should be checked weekly to determine if the rectifiers and anodes are operating satisfactorily. When problems are encountered, immediate steps should be taken to restore protection.

2.50 **Record Keeping.** When a structure is installed, a cathodic protection system file should be set up at the location responsible for design. This file should contain drawings of the structure showing the position of all anodes. In the case of impressed current systems, the drawings should also show the location of all rectifiers and wiring. This file should also contain a record of all potential surveys, rectifier current/voltage readings, and any repairs made to the system.

CREST OFFSHORE, INC.

Sheet 11.3 of 13

Client U.S. ... Subject ... Job No ... Calculation ...

Date 4-22-75

11.3 DESIGN DATA

Zones for corrosion protection:

a) Splash Zone : from 80ft to 84ft above mudline (84ft MLW)

b) Atmospheric Zone : 78ft above mud-line and up

c) Submerged Zone : 0ft to 80ft (above mud-line)

0ft to 130ft (below mud-line)

Current Requirements:

Current Density = 6 mA/ft² of surface in water

2 mA/ft² of surface in mudzone

Design Life:

N = 10 yrs

CREST OFFSHORE, INC.

Sheet 11-22 of [illegible]

By [illegible] Client [illegible] Subject Structural Connections [illegible]
Date [illegible] Job No. [illegible] Calculation [illegible]

11.4 SUBMERGED ZONE

A [illegible] Zone

MEMBER SIZE	MEMBER LENGTH (SPEC.)	SURFACE AREA	No. REQUIRED	TOTAL AREA	NOTES
	FT	SQ.FT		SQ.FT	
41½x1 WT	36'-0"	386.42	3	1,159.26	Jkt Leg
40 Dx.5 WT	46'-0"	481.71	3	1,445.13	Jkt Leg
[illegible]	5?'-0"	273.32	3	819.96	Mudline Leg
4[illegible]	2?'-0"	106.29	3	318.87	
[illegible]	46'-9"	229.73	3	689.19	+32' M/L
14 Dx.375 WT	24'-4"	89.17	3	267.52	"
12¾ Dx.5 WT	33'-6"	131.85	3	395.55	-64' M/L
10¾ x.375 WT	19'-0"	65.92	3	197.76	"
[illegible]x.5 WT	40'-2"	168.39	6	1,010.34	0-32' M/L V.
2[illegible]x.625 WT	54'-5"	2[illegible].36	3	856.08	32'-64' M/L V.
20[illegible] WT	23'-3"	123.94	3	371.82	64-81' M/L V.
				7,531.48	

(3) Mud Zone

Member Size	Member Length	Surface Area	No. Required	Total Area	Notes
	FT	SQ. FT		SQ. FT	
[illegible]	18[illegible]	1,[illegible]96.46	3	3,[illegible], 38	Piling

Total Current Requirements

$$I = 6 \times 7,531.43 + 2 \times 3,[illegible]$$

$$= 55,363. \text{ m Amps.}$$

$$= 55.4 \text{ Amps.}$$

Capacity of Alloy

Use $C = 1250 \quad \frac{\text{amp-hrs}}{\text{lb}}$

(Aluminum - Zinc - Mercury)

CREST OFFSHORE, INC.

Calculation

Total Weight of ... Anodes

$$= \frac{... 8760}{...}$$

$$= \frac{55.4 \times 10 \times 8760}{1000}$$

$$= 3,882.4 \text{ lbs}$$

Use 325 lbs anode

$$\text{No. of } a = \frac{3,882.4}{325} = 11.9$$

Use 15 @ 325 lbs/anode

4,875#

CREST OFFSHORE, INC.

By [illegible] Check [illegible] Subject [illegible]

Date [illegible] Job No. [illegible] Calculation [illegible] Protection

11.5 SPLASH ZONE

Use 0.5 inch [illegible] steel in excess of that needed for strength.

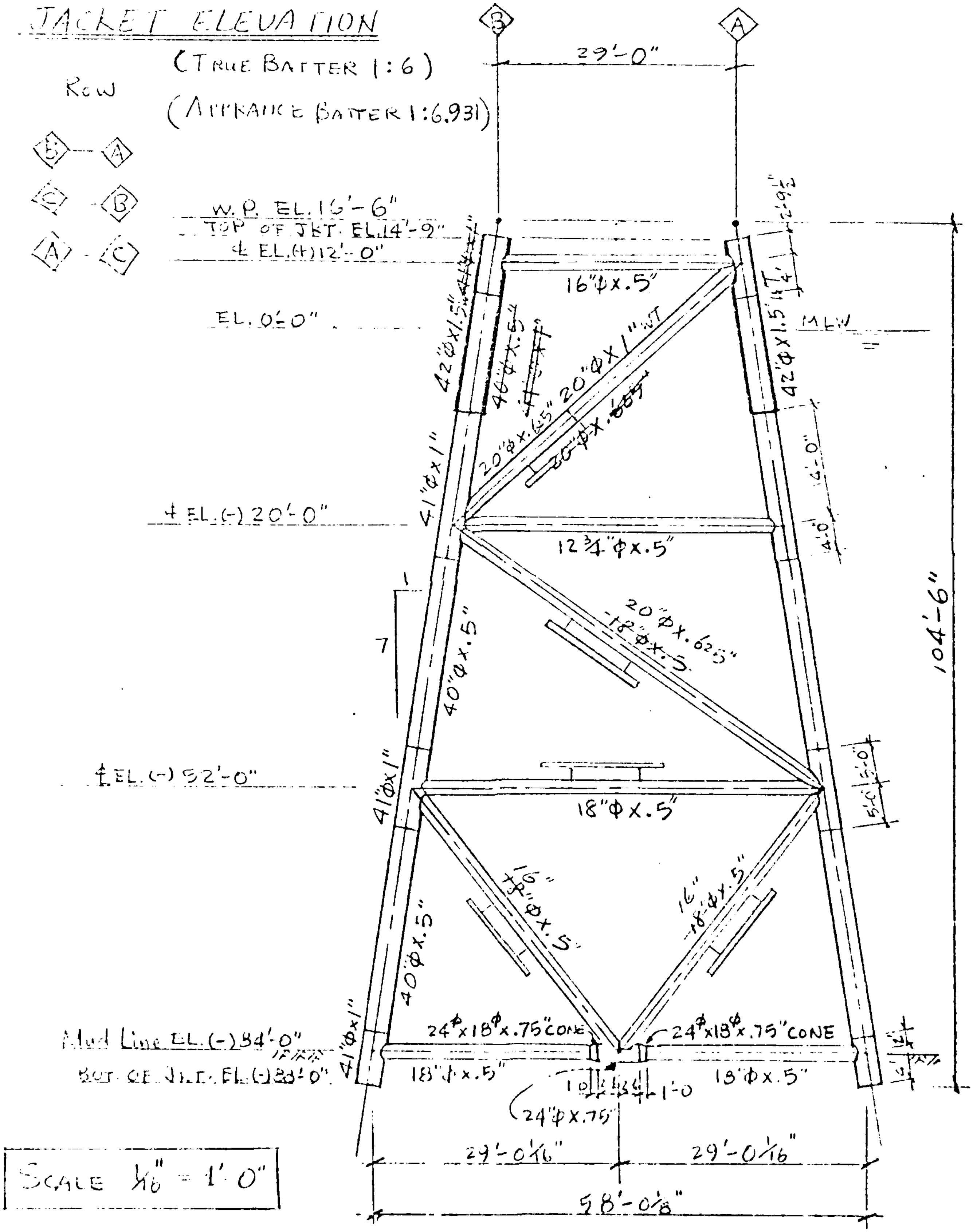
CREST OFFSHORE, INC.

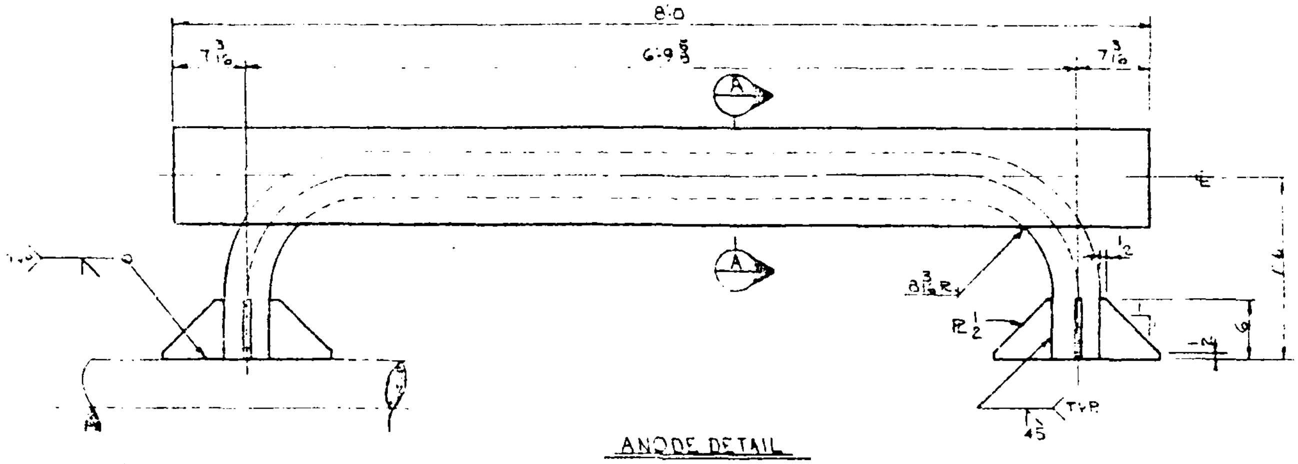
Sheet ___ of ___

By ___ Chkd. by ___ Subject ___

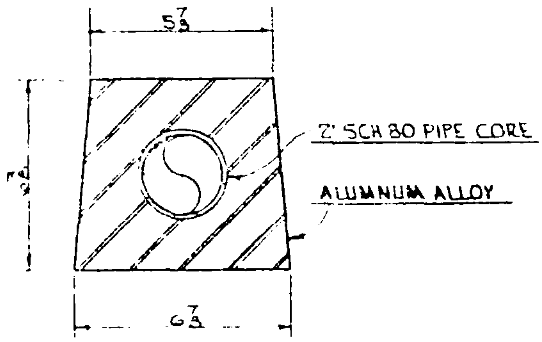
Date ___ Job No. ___ Calculation ___

JACKET ELEVATION





ANODE DETAIL



SECTION (A)

ANODE WEIGHT LBS EACH

ALUMINUM ALLOY	CORE	TOTAL ANODE
325	43	368

NOTE:
THE CATHODIC PROTECTION SYSTEM USED ON THIS PLATFORM WAS DESIGNED IN ACCORDANCE WITH PROCEDURES DEFINED BY CATHODIC PROTECTION SERVICE OF HOUSTON, TEXAS. THE ANODES USED SHALL BE OF THE DOW GALVALUM TYPE AS SHOWN ON CATHODIC PROTECTION SERVICE DRAWING S-233.

II-5 ATMOSPHERIC ZONE

[illegible] corrosion protection [illegible]

MEMBER SIZE	MEMB. LENGTH (C.-to-C.)	SURFACE AREA	No. REQUIRED	TOTAL AREA	NOTES
	[illegible]	SQ FT		SQ FT	
[illegible]	26'-9"	228.2	3	684.6	JKT LEG
16"Ø x .5" WT	30'-0"	126.7	3	380.1	JKT BRACES EL.(+)12'-0"
12¾"Ø x .5" WT	15'-0"	50.1	3	150.3	"
36"Ø x 1.25" WT	57'-0"	537.2	3	1,611.6	Sup. STR LEG
12¾"Ø x .5" WT	29'-0"	96.8	3	290.4	BRACES EL.(+)45'-0"
12¾"Ø x .5" WT	32'-8"	109.0	3	327.0	"
[illegible] x .220"	12'-6"	21.7	2	43.4	BRACES
[illegible] x .375"	18'-0"	60.1	2	120.2	"
W [illegible] x 30	[illegible]	159.5	3	478.5	EQUIP. DECK
W 8 x 24	25'-0"	74.0	2	148.0	"
W 8 x 24	20'-0"	59.2	10	592.0	"
¼" PL	20' x 25'	500.0	2	1000.0	"

continue

CREST OFFSHORE, INC.

Sheet [illegible] of [illegible]

By C. [illegible] Client [illegible] Subject [illegible]
Date [illegible] Job No. 27-[illegible] Calculation [illegible]

MEMBER SIZE	MEMBER LENGTH [illegible]	SURFACE AREA	NO. [illegible]	TOTAL AREA	NOTES
	FT	SQ.FT		SQ.FT	
W15x50	[illegible]	170.6	4	632.4	Top Deck
[illegible]x27	33'-0"	128.9	4	515.6	"
W12x25	33'-0"	96.3	4	[illegible]	"
4x3/8 F.B	5'-0"	3.83	57	218.3	"
1/2" PL	35x35'	1,225.0	2	2450.0	"
W6x[illegible]	29'-0"	87.0	2	174.0	"
			TOTAL	10,251.6	

10,251.6 SQ.FT

Stairway * 1,331.

Boat Landing* 743. SQ.FT

12,331 SQ.FT

---

* Values from Skirt Pile Structure under separate contract Crest Offshore Job No. 27-621-00 to Cubic Corporation

SECTION 12

WEIGHT TAKEOFF

12.1 INTRODUCTION

Set forth herein is the weight and material list of the major components of the proposed three-pile structure. Boat landing, stairway, safety nets and miscellaneous items are not included in this section.

CREST OFFSHORE, INC.

Sheet 12.2 of 6

By C. Chen Chkd. by [illegible] Subject Structural Concept Analysis
Date [illegible] Job No. [illegible] Calculation Weight Items

12.2 MATERIAL LISTING

(A. Summary

The listing presented herein summarizes material requirements for the proposed three-pile structure excluding boat landing, stairway and miscellaneous items.

CREST OFFSHORE, INC.

Sheet [illegible]

[illegible] U.S. Navy [illegible]
Date [illegible] Job No. [illegible] [illegible]

BILL OF MATERIALS SUMMARY
ACTR 5-PILE STRUCTURE - MATERIAL LISTING -- U.S. NAVY -- C.CHERN

NOMINAL DIMENSION	TOTAL LENGTH (FEET)	TOTAL WEIGHT (POUND)
PIPE		
42.000 O.D. X 1.500 WT	63.00	41303.43
41.000 O.D. X 1.000 WT	102.00	43615.71
40.000 O.D. X 0.500 WT	[illegible]	[illegible]
36.000 O.D. X 1.750 WT	300.00	192221.81
35.000 O.D. X 1.500 WT	480.00	265542.75
30.000 O.D. X 1.250 WT	237.00	[illegible]
24.000 O.D. X 0.750 WT	21.00	3914.59
20.000 O.D. X 1.000 WT	41.40	8403.85
20.000 O.D. X 0.625 WT	[illegible]	[illegible]
18.000 O.D. X 0.500 WT	[illegible]	27994.20
16.000 O.D. X 0.500 WT	330.90	27414.55
14.000 O.D. X 0.375 WT	160.14	8746.81
12.750 O.D. X 0.500 WT	349.02	22852.78
12.750 O.D. X 0.375 WT	95.31	4728.21
[illegible] O.D. X 0.250 WT	18.00	[illegible]
W SHAPE		
W 18 X 50.00	227.00	11350.00
W 12 X 27.00	140.00	3780.00
W 8 X 24.00	250.00	6000.00
W 6 X 15.50	58.00	899.00
CHANNELS		
C 12 X 25.00	152.00	3800.00
PLATE		
1.000 THICKNESS	4.18	170.61
0.375 THICKNESS	108.16	1656.16
0.250 THICKNESS	1725.00	17609.37

TOTAL WEIGHT 858449.38 LBS

Excess Piling to Be cut off in Field

[illegible] O.D. x 1.75	12.00	[illegible]
[illegible] O.D. x 1.50	[illegible]	[illegible]
36 [illegible] O.D. x [illegible]	[illegible]	13920.
[illegible]		
[illegible]	[illegible]	25920.
		315925. LBS

453 TONS

CREST OFFSHORE, INC.

Sheet [illegible] of 6

By [illegible] Client U.S. NAVY Subject [illegible]
Date [illegible] Job No. [illegible] Calculation Weight [illegible]

(B) Material Listing -- Comm[illegible]

[illegible]

BILL OF MATERIALS SUMMARY
ACMR 3-PILE STRUCTURE MATERIAL LISTING -- PILING U.S.NAVY--C.CHERN

NOMINAL DIMENSION	TOTAL LENGTH (FEET)	TOTAL WEIGHT (POUNDS)
PIPE		
36,000 O.D. X 1.750 WT	300.00	192221.81
36,000 O.D. X 1.500 WT	480.00	265542.75
36,000 O.D. X 1.250 WT	66.00	30647.25
TOTAL WEIGHT		488411.81 LBS

EXCESS PILING TO BE CUT OFF IN FIELD

[illegible] x 1.25   3 x 1 x 10' x 464 #/'   = 13,920 #

36" x 1.75   3 x 2 x 2' x 640 #/'   = 7,680 #

36" x 1.50   3 x 3 x 2' x 553 #/'   = 9,954 #

31,554 #

[illegible]

[illegible] x .425   3 x [illegible] x 8' x 216 #/'   = 25,920 #

Total   488 412
31,554
25,920
545,886 #

CREST OFFSHORE, INC.

Sheet [illegible] of [illegible]

By [illegible] Client [illegible] Subject [illegible]

Date [illegible]-24-7[illegible] Job No. [illegible] Calculation Weight Take-off

[illegible] Jacket

BILL OF MATERIALS SUMMARY

[illegible] 3-PILE STRUCTURE MATERIAL LISTING -- JACKET   U.S. NAVY--[illegible]

NOMINAL PIPE SIZE	TOTAL LENGTH (FEET)	TOTAL WEIGHT ([illegible])
PIPE		
42.000 O.D. x 1.500 WT	[illegible]3.60	[illegible]503.83
[illegible]1.000 O.D. x 1.000 WT	1[illegible]2.[illegible]	43615.71
[illegible] O.D. x [illegible].500 WT	1[illegible]6.[illegible]	3[illegible]960.07
24.000 O.D. x 0.750 WT	21.[illegible]	3914.59
20.000 O.D. x 1.000 WT	[illegible]1.40	8408.85
20.[illegible] O.D. x [illegible].625 WT	195.80	25[illegible]7.54
16.000 O.D. x 0.500 WT	209.28	27994.20
16.[illegible] O.D. x 0.500 WT	33[illegible].40	27[illegible]14.55
1[illegible] O.D. x 0.375 WT	160.14	8706.81
12.750 O.D. x 0.500 WT	164.07	10742.81
12.750 O.D. x 0.375 WT	59.31	2982.30

TOTAL WEIGHT 231130.44 LBS

CREST OFFSHORE, INC.

Sheet [illegible] of 6

[illegible] Subject [illegible] Calculation Weight Take-off

[illegible]

[illegible] MATERIAL LISTING ** SUPERSTRUCTURE U.S.NAVY--[illegible]

[illegible]	[illegible] (FEET)	TOTAL WEIGHT (POUNDS)
PIPE		
[illegible] O.D. X 1.250 [illegible]	171.00	[illegible]
12.75 O.D. X 0.500 [illegible]	154.95	[illegible]
[illegible] O.D. X [illegible].375 [illegible]	36.00	[illegible]
[illegible] O.D. X 0.280 [illegible]	16.00	[illegible]
W SHAPE		
W 18 X [illegible]	227.[illegible]	[illegible]
W 12 X 27.00	140.00	3780.00
W 8 X 28.00	250.00	[illegible]
W 6 X 15.5[illegible]	55.[illegible]	[illegible]
CHANNELS		
C 12 X 25.00	152.00	3800.00
PLATE		
1.[illegible] THICKNESS	4.18	17[illegible].[illegible]
0.375 THICKNESS	106.16	1656.15
[illegible] THICKNESS	1725.[illegible]	176[illegible].37

TOTAL WEIGHT 138[illegible]7.13 LBS

APPENDIX A

COMPUTER PRINTOUTS

A.1 INTRODUCTION

The computer printouts compiled hereinafter were used, respectively, in the following items:

(1) Pile Driving Resistance Curves;

(2) Laterally Loaded Pile Capacity;

(3) Wave and Wind Loads;

(4) Space Frame Analysis; and

(5) Member Weight Takeoff.

A-2 PILE DRIVING RESISTANCE CURVES

Pile Driving Resistance Curves

Pile Diameter	- 30 in.
Minimum Wall Thickness	- .75 in.
Penetration	- 180 ft.
Hammer	- Vulcan 040
Quake Factor, tip	- .025 in.

6000 REMOTE BATCH

UNITED COMPUTING 67, APEX/SL, B.0.24

10.19.31.   04/15/76.

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JJJJJJJJJJJJ  VV        VV  JJJJJJJJJJJJ   2222222222   JJJJJJJJJJJJ  RRRRRRRRRRR   EEEEEEEEEEEE
JJJJJJJJJJJJ  VV        VV  JJJJJJJJJJJJ  222222222222  JJJJJJJJJJJJ  RRRRRRRRRRRR  EEEEEEEEEEEE
      JJ      VV        VV        JJ      2         22        JJ      RR        RR  EE
      JJ      VV        VV        JJ                22        JJ      RR        RR  EE
      JJ      VV        VV        JJ                22        JJ      RR        RR  EE
      JJ      VV        VV        JJ                22        JJ      RR        RR  EE
      JJ      VVV      VVV        JJ                22        JJ      RR        RR  EE
      JJ       VVV    VVV         JJ          2222222         JJ      RRRRRRRRRRRR  EEEEEEEE
      JJ        VVV  VVV          JJ         2222222          JJ      RRRRRRRRRRR   EEEEEEEE
      JJ          VVVV            JJ        22                JJ      RR  RR        EE
      JJ           VV             JJ       22                 JJ      RR   RR       EE
      JJ           VV             JJ      22                  JJ      RR    RR      EE
      JJ           VV             JJ      22                  JJ      RR     RR     EE
JJ    JJ           VV       JJ    JJ      22            JJ    JJ      RR      RR    EE
JJJJJJJJ           VV       JJJJJJJJ      222222222222  JJJJJJJJ      RR       RR   EEEEEEEEEEEE
 JJJJJJ            VV        JJJJJJ       222222222222   JJJJJJ       RR        RR  EEEEEEEEEEEE
```

```
WAVE EQUATION PROGRAM CHECK-HOUSTON UCC.
MC CLELLAND REPORT DATA FOR CUBIC PROJECT.
MARCH 30,1976

 PROB
   1      30INCH DIAM PILE-EAST COAST USA,
          180FT PENETRATION-VULCAN 040 HAMMER,
          QTIP=.025,MINIMUM WALL THICKNESS=.75        RU = 14

TABLE 1 -- PROGRAM CONTROL DATA

     PILE TYPE                            1
     NEW HAMMER DATA OPTION               1
     NEW MATERIAL DATA OPTION             1
     NEW PILE SECTION DATA OPTION         1
     NEW SOIL DATA OPTION                 1
     SPECIFIED BLOW COUNT OPTION          1
     OUTPUT OPTION FOR STRESS             1
     BPF FOR STRESS OUTPUT OPTION                       275.
     ULTIMATE RESISTANCE INCREMENT (TONS)               50.0
     MAX BLOWS FOR RESISTANCE-BLOW CURVE (BPF)          300.
     SPECIFIED SEGMENT LENGTH (FT)                      -0.00


TABLE 2 -- HAMMER DATA

     HAMMER DESCRIPTION            VULCAN 040 HAMMER
     HAMMER EFFICIENCY                   .75
     HAMMER ENERGY (FT-LBS)        120000.00
     HAMMER EXPLOSIVE FORCE (LBS)       -0.00
     NUMBER OF HAMMER SEGMENTS              2

     SEGMENT     SLACK      WEIGHT     AREA    COEF OF    SPRING CONSTANT
      NUMBER      (IN)       (LB)    (SQ IN) RESTITUTION    (LB / IN)

         1       1000.00  40000.00     1.00       .60       2780000.00
         2       1000.00  27800.00     1.00       .90             0.00

TABLE 3 -- MATERIAL DATA

     NUMBER OF MATERIAL TYPES =     1

        MATERIAL      (TOD)    UNIT WT.   MODULUS
          TYPE                  (PCF)      (PSI)

            1        30.000     490.0 29000000.

TABLE 4 -- PILE SECTION DATA

     TOTAL NUMBER OF PILE SECTIONS        5
```

NUMBER OF SECTIONS ADDED 0
LENGTH OF FREE STANDING PILE(FT) 160.00

SECTION NUMBER	MATERIAL TYPE	WALL THICKNESS (IN)	LENGTH (FT)	STATION NUMBER TOP	STATION NUMBER BOTTOM
1	1	1.250	30.	0	30
2	1	1.750	95.	30	125
3	1	1.250	40.	125	165
4	1	1.000	40.	165	205
5	1	.750	135.	205	340

TABLE 5 -- SOIL DATA

NUMBER OF TIP RESISTANCE PERCENTAGES 1
SIDE DAMPENING RESISTANCE = JSIDE .15
POINT DAMPENING RESISTANCE = JPONT .15
SOIL QUAKE FOR SIDE = QSIDE .10
SOIL QUAKE FOR POINT = QPOINT .03

TIP RESISTANCE PERCENTAGE
14.0000

TABLE 6 -- SPECIFIED BLOW COUNT DATA

NUMBER OF SPECIFIED BLOW COUNTS 4

BLOWS PER FOOT	TOLERANCE
150.	25.
200.	25.
250.	25.
300.	25.

PROB 1 30INCH DIAM PILE-EAST COAST USA,
180FT PENETRATION-VULCAN 040 HAMMER,

QTIP=.025,MINIMUM WALL THICKNESS=.75 RU = 14

TABLE 7 -- PILE SEGMENT DATA

SEGMENT	ELEV FT	SLACK IN.	WEIGHT LBS	AREA SQ.IN.	COEF RSTITU	SPR STIFF LBS/IN.
1	0.00	1000.00	40000.00	1.00	.60	2780000.
2	0.00	1000.00	27800.00	1.00	.90	27284469.
3	160.00	0.00	3841.78	112.90	1.00	27284469.
4	150.00	0.00	3841.78	112.90	1.00	27284469.
5	140.00	0.00	3841.78	112.90	1.00	27284469.
6	130.00	0.00	4564.28	155.31	1.00	43460350.
7	121.36	0.00	4564.28	155.31	1.00	43460350.
8	112.73	0.00	4564.28	155.31	1.00	43460350.
9	104.09	0.00	4564.28	155.31	1.00	43460350.
10	95.45	0.00	4564.28	155.31	1.00	43460350.
11	86.82	0.00	4564.28	155.31	1.00	43460350.
12	78.18	0.00	4564.28	155.31	1.00	43460350.
13	69.55	0.00	4564.28	155.31	1.00	43460350.
14	60.91	0.00	4564.28	155.31	1.00	43460350.
15	52.27	0.00	4564.28	155.31	1.00	43460350.
16	43.64	0.00	4564.28	155.31	1.00	43460350.
17	35.00	0.00	3841.78	112.90	1.00	27284469.
18	25.00	0.00	3841.78	112.90	1.00	27284469.
19	15.00	0.00	3841.78	112.90	1.00	27284469.
20	5.00	0.00	3841.78	112.90	1.00	27284469.
21	-5.00	0.00	3100.15	91.11	1.00	22017380.
22	-15.00	0.00	3100.15	91.11	1.00	22017380.
23	-25.00	0.00	3100.15	91.11	1.00	22017380.
24	-35.00	0.00	3100.15	91.11	1.00	22017380.
25	-45.00	0.00	1978.72	68.92	1.00	19739720.
26	-53.44	0.00	1978.72	68.92	1.00	19739720.
27	-61.88	0.00	1978.72	68.92	1.00	19739720.
28	-70.31	0.00	1978.72	68.92	1.00	19739720.
29	-78.75	0.00	1978.72	68.92	1.00	19739720.
30	-87.19	0.00	1978.72	68.92	1.00	19739720.
31	-95.63	0.00	1978.72	68.92	1.00	19739720.
32	-104.06	0.00	1978.72	68.92	1.00	19739720.
33	-112.50	0.00	1978.72	68.92	1.00	19739720.
34	-120.94	0.00	1978.72	68.92	1.00	19739720.
35	-129.38	0.00	1978.72	68.92	1.00	19739720.
36	-137.81	0.00	1978.72	68.92	1.00	19739720.
37	-146.25	0.00	1978.72	68.92	1.00	19739720.
38	-154.69	0.00	1978.72	68.92	1.00	19739720.
39	-163.13	0.00	1978.72	68.92	1.00	19739720.
40	-171.56	1000.00	1978.72	68.92	1.00	19739720.

PROB 1 30INCH DIAM PILE-EAST COAST USA,
180FT PENETRATION-VULCAN 040 HAMMER,

QTIP=,025,MINIMUM WALL THICKNESS=,75 RU = 14

TABLE 8 -- MAXIMUM STRESS DATA

TIP RESISTANCE PERCENTAGE = 14,00

PERMANENT SET OF PILE = ,0411 INCHES
NUMBER OF BLOWS PER FOOT = 292,30
TOTAL INTERVALS = 192

SEG	ELEV FT	MAX C STRESS LBS/SQ.IN.	TIME N	MAX T STRESS LBS/SQ.IN.	TIME N	AREA SQ.IN.	DMAX(M) IN.	D(M) IN.	V(M) FT/SEC
1	0,00	1747701,	30	0,	158	1,000	1,413143	1,408242	-,66
2	0,00	1528932,	42	0,	153	1,000	1,048332	,864676	-2,90
3	160,00	13899,	45	611,	87	112,901	1,075414	,844705	-2,65
4	150,00	14191,	47	1181,	90	112,901	1,071962	,827144	-2,49
5	140,00	14356,	49	1700,	92	112,901	1,065286	,813632	-2,26
6	130,00	10466,	51	1471,	94	155,313	1,055434	,799513	-1,84
7	121,36	10492,	53	1621,	95	155,313	1,047041	,790153	-1,59
8	112,73	10492,	55	1690,	97	155,313	1,036542	,779254	-1,17
9	104,09	10420,	56	1676,	99	155,313	1,024085	,767053	-,95
10	95,45	10261,	58	1572,	100	155,313	1,010086	,756511	-1,19
11	86,82	10053,	60	1354,	102	155,313	,994704	,746731	-1,09
12	78,18	9827,	62	1014,	103	155,313	,978318	,733614	-,57
13	69,55	9570,	64	604,	104	155,313	,961346	,719311	-,66
14	60,91	9282,	66	125,	105	155,313	,944225	,707473	-,93
15	52,27	8957,	68	0,	0	155,313	,929152	,694137	-,20
16	43,64	8698,	71	0,	0	155,313	,922507	,675023	,98
17	35,00	11757,	74	0,	0	112,901	,917891	,653857	1,21
18	25,00	11523,	76	0,	0	112,901	,908078	,625961	-,13
19	15,00	11270,	79	0,	0	112,901	,894908	,608956	-1,67
20	5,00	11212,	83	0,	0	112,901	,877626	,598529	-2,51
21	-5,00	14055,	85	0,	0	91,106	,855801	,589515	-2,75
22	-15,00	14288,	89	0,	0	91,106	,824020	,577108	-2,70
23	-25,00	14526,	92	0,	0	91,106	,787344	,561862	-2,52
24	-35,00	14854,	96	0,	0	91,106	,746063	,543012	-2,28
25	-45,00	19642,	98	0,	0	68,919	,700624	,519998	-2,02
26	-53,44	19475,	101	0,	0	68,919	,648425	,491031	-1,77
27	-61,88	19157,	103	0,	0	68,919	,595229	,459169	-1,55
28	-70,31	18672,	105	0,	0	68,919	,541616	,424704	-1,33
29	-78,75	18047,	108	0,	0	68,919	,488040	,388228	-1,13
30	-87,19	17259,	111	0,	0	68,919	,434532	,350189	-,94
31	-95,63	16372,	114	0,	0	68,919	,381824	,311466	-,79
32	-104,06	15521,	114	0,	0	68,919	,330350	,272728	-,66
33	-112,50	14554,	117	0,	0	68,919	,281966	,234767	-,54
34	-120,94	13273,	118	0,	0	68,919	,237115	,198430	-,46
35	-129,38	11697,	121	0,	0	68,919	,195763	,164530	-,39
36	-137,81	10164,	123	0,	0	68,919	,159137	,133826	-,32
37	-146,25	8378,	124	0,	0	68,919	,127922	,107161	-,27
38	-154,69	6516,	122	0,	0	68,919	,101956	,085266	-,22

40	-171.56	3977.	124	0.	0	68.919	.066053	.057129	-.11

PROB 1 30INCH DIAM PILE-EAST COAST USA,
180FT PENETRATION-VULCAN 040 HAMMER,

QTIP=,025,MINIMUM WALL THICKNESS=,75 RU = 14

TABLE 9 -- RESISTANCE-BLOW CURVE DATA

TIP RESISTANCE PERCENTAGE = 14.00

BLOWS/FT.	RESISTANCE TOTAL-TONS	DYNAMIC PT FORCE-TONS	MAX C STRESS LBS/SQ.IN.	SEG NO.	MAX T STRESS LBS/SQ.IN.	SEG NO.
2.58	50.	23.10	15555.	27	11674.	30
4.35	100.	42.66	16576.	25	8709.	30
6.45	150.	58.66	16833.	25	6089.	31
9.65	200.	71.93	17064.	25	3915.	11
12.96	250.	82.94	17289.	25	2895.	12
16.24	300.	92.08	17512.	25	1921.	12
19.42	350.	99.65	17728.	25	1760.	9
23.40	400.	105.93	17935.	25	1751.	9
28.51	450.	111.15	18146.	25	1743.	9
35.24	500.	115.25	18351.	25	1734.	9
44.34	550.	118.33	18550.	25	1726.	9
57.11	600.	120.64	18743.	25	1718.	9
75.69	650.	121.96	18927.	25	1709.	9
103.84	700.	123.93	19116.	25	1701.	9
146.99	750.	128.93	19299.	25	1701.	5
205.74	800.	133.31	19474.	25	1701.	5
292.30	850.	137.06	19642.	25	1700.	5
441.84	900.	140.57	19804.	25	1700.	5

PROB 1 30INCH DIAM PILE-EAST COAST USA,
180FT PENETRATION-VULCAN 040 HAMMER,

QTIP=.025,MINIMUM WALL THICKNESS=.75 RU = 14

TABLE 10 -- SPECIFIED BLOW DATA

TIP RESISTANCE PERCENTAGE = 14.00

BLOWS PER FOOT	RESISTANCE TONS
146.99	750.
205.74	800.
244.73	826.
292.30	850.

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          JYJ2JRF,   04/15/76, *UNITED COMPUTING* 67, APEX/SL, 8,0,24

10,17,12$PIL,CM100,T1000,
10,17,12$FL       64      0,000
10,17,12$AC3400C880023,277710OCC )B
10,17,12, 04/15/76,JYJ2JRF
10,17,12,RFL,40000,
10,17,12$FL     3392      0,000
10,17,12$FL    16384      0,001
10,17,12,MAP,OFF,
10,17,13$FL      256      0,001
10,17,13,GET,PILB(C880024)
10,17,21,READY =    PILB
10,17,21$FL     4096      0,001          0         0,
10,17,21$FI       72          1
10,17,21,PILB,
10,17,21$FL00 16384       0,001
10,17,24$FL01 16384       0,136       190         5
10,17,24,FL REQUIRED TO LOAD      36370B ( 15608)
10,17,24,FL REQUIRED TO EXECUTE  34000B ( 14336)
10,17,24$FL    16384      0,140
10,17,38,END PILORI
10,17,38,COST,
10,17,38$FL    14336      8,729        30         4
10,17,39,            SERVICE UNITS=      26,4
10,17,39,           JOB COST=$        6,60
10,17,39$FL    12288      8,749         7         5
10,17,40,EXIT,
10,17,40$JT00  2368       8,749
10,17,40,    *FL*  *CPU SEC, *DISC PRUS* DISC ACC
10,17,40,*P,F, PRUS*P,F, ACC *TAPE PRUS* TAPE ACC
```

Pile Driving Resistance Curves

Pile Diameter	- 36 in.
Minimum Wall Thickness	- .75 in.
	- 1.25 in.
Penetration	- 200 ft.
Hammer	- Vulcan 040
Quake Factor, tip	- .025 in.
	- .10 in.
	- .30 in.

6 0 0 0   R E M O T E   B A T C H

UNITED COMPUTING 67, APEX/SL, B,0,24

09.20.35.   04/20/76.

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JJJJJJJJJJJJ  YY        YY  JJJJJJJJJJJJ    00000000    JJJJJJJJJJJJ  VV        VV   CCCCCCCCCC
JJJJJJJJJJJJ  YY        YY  JJJJJJJJJJJJ   00      00   JJJJJJJJJJJJ  VV        VV  CCCCCCCCCCCC
     JJ       YY        YY       JJ        00      00        JJ       VV        VV  CC          CC
     JJ       YY        YY       JJ        00      00        JJ        VV      VV   CC
     JJ       YY        YY       JJ        00      00        JJ        VV      VV   CC
     JJ       YY        YY       JJ        00      00        JJ        VV      VV   CC
     JJ       YYY      YYY       JJ        00      00        JJ         VV    VV    CC
     JJ        YYY    YYY        JJ        00      00        JJ         VV    VV    CC
     JJ         YYY  YYY         JJ        00      00        JJ         VV    VV    CC
     JJ           YYYY           JJ        00      00        JJ          VV  VV     CC
     JJ            YY            JJ        00      00        JJ          VV  VV     CC
     JJ            YY            JJ        00      00        JJ          VV  VV     CC
     JJ            YY            JJ        00      00        JJ           V  V      CC
JJ   JJ            YY       JJ   JJ        00      00   JJ   JJ           VVVV      CC          CC
JJJJJJJ            YY       JJJJJJJ         00    00    JJJJJJJ           VVVV      CCCCCCCCCCCC
 JJJJJ             YY        JJJJJ           00000000    JJJJJ             VV        CCCCCCCCCC
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WAVE EQUATION ANALYSIS FOR 36-IN. DIAMETER PIPE PILES
MC CLELLAND REPORT DATA FOR ACMR 3-PILE STRUCTURE -- BORING 1
APRIL 19 1976

 PROB
   1      36-IN. DIAMETER PILES 3-PILE STRUCTURE
          200FT PENETRATION -- VULCAN 040 HAMMER
          QTIP=.025,MINIMUM WALL THICKNESS=.75 IN,     RU = 14

TABLE 1 -- PROGRAM CONTROL DATA

     PILE TYPE                              1
     NEW HAMMER DATA OPTION                 1
     NEW MATERIAL DATA OPTION               1
     NEW PILE SECTION DATA OPTION           1
     NEW SOIL DATA OPTION                   1
     SPECIFIED BLOW COUNT OPTION            1
     OUTPUT OPTION FOR STRESS               1
     BPF FOR STRESS OUTPUT OPTION                       275.
     ULTIMATE RESISTANCE INCREMENT (TONS)               50.0
     MAX BLOWS FOR RESISTANCE-BLOW CURVE (BPF)          300.
     SPECIFIED SEGMENT LENGTH (FT)                      -0.00

TABLE 2 -- HAMMER DATA

     HAMMER DESCRIPTION              VULCAN 040 HAMMER
     HAMMER EFFICIENCY                      .75
     HAMMER ENERGY (FT-LBS)           120000.00
     HAMMER EXPLOSIVE FORCE (LBS)         -0.00
     NUMBER OF HAMMER SEGMENTS                2

     SEGMENT     SLACK      WEIGHT      AREA    COEF OF    SPRING CONSTANT
      NUMBER     (IN)        (LB)     (SQ IN) RESTITUTION    (LB / IN)

        1       1000.00  40000.00      1.00       .60       2780000.00
        2       1000.00  27800.00      1.00       .90             0.00

TABLE 3 -- MATERIAL DATA

     NUMBER OF MATERIAL TYPES =    1

         MATERIAL      (TUD)   UNIT WT.   MODULUS
           TYPE                 (PCF)      (PSI)

             1         36.000     490.0 29000000.

TABLE 4 -- PILE SECTION DATA

     TOTAL NUMBER OF PILE SECTIONS        4
     NUMBER OF SECTIONS CHANGED           0
```

TOTAL NUMBER OF PILE SECTIONS 4
NUMBER OF SECTIONS CHANGED 0
NUMBER OF SECTIONS ADDED 0
LENGTH OF FREE STANDING PILE(FT) 120.00

SECTION NUMBER	MATERIAL TYPE	WALL THICKNESS (IN)	LENGTH (FT)	STATION NUMBER TOP	STATION NUMBER BOTTOM
1	1	1.250	90.	0	90
2	1	1.500	100.	90	190
3	1	1.250	50.	190	240
4	1	.750	80.	240	320

TABLE 5 -- SOIL DATA

NUMBER OF TIP RESISTANCE PERCENTAGES 1
SIDE DAMPENING RESISTANCE = JSIDE .15
POINT DAMPENING RESISTANCE = JPONT .15
SOIL QUAKE FOR SIDE = QSIDE .10
SOIL QUAKE FOR POINT = QPOINT .03

TIP RESISTANCE PERCENTAGE
14.0000

TABLE 6 -- SPECIFIED BLOW COUNT DATA

NUMBER OF SPECIFIED BLOW COUNTS 4

BLOWS PER FOOT	TOLERANCE
150.	25.
200.	25.
250.	25.
300.	25.

PROB 1 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.025,MINIMUM WALL THICKNESS=.75 IN. RU = 14

TABLE 7 -- PILE SEGMENT DATA

SEGMENT	ELEV FT	SLACK IN.	WEIGHT LBS	AREA SQ.IN.	COEF RSTITU	SPR STIFF LBS/IN.
1	0.00	1000.00	40000.00	1.00	.60	2780000.
2	0.00	1000.00	27800.00	1.00	.90	36642910.
3	120.00	0.00	4179.19	136.46	1.00	36642910.
4	111.00	0.00	4179.19	136.46	1.00	36642910.
5	102.00	0.00	4179.19	136.46	1.00	36642910.
6	93.00	0.00	4179.19	136.46	1.00	36642910.
7	84.00	0.00	4179.19	136.46	1.00	36642910.
8	75.00	0.00	4179.19	136.46	1.00	36642910.
9	66.00	0.00	4179.19	136.46	1.00	36642910.
10	57.00	0.00	4179.19	136.46	1.00	36642910.
11	48.00	0.00	4179.19	136.46	1.00	36642910.
12	39.00	0.00	4179.19	136.46	1.00	36642910.
13	30.00	0.00	4610.13	162.58	1.00	47147562.
14	21.67	0.00	4610.13	162.58	1.00	47147562.
15	13.33	0.00	4610.13	162.58	1.00	47147562.
16	5.00	0.00	4610.13	162.58	1.00	47147562.
17	-3.33	0.00	4610.13	162.58	1.00	47147562.
18	-11.67	0.00	4610.13	162.58	1.00	47147562.
19	-20.00	0.00	4610.13	162.58	1.00	47147562.
20	-28.33	0.00	4610.13	162.58	1.00	47147562.
21	-36.67	0.00	4610.13	162.58	1.00	47147562.
22	-45.00	0.00	4610.13	162.58	1.00	47147562.
23	-53.33	0.00	4610.13	162.58	1.00	47147562.
24	-61.67	0.00	4610.13	162.58	1.00	47147562.
25	-70.00	0.00	3869.62	136.46	1.00	39574342.
26	-78.33	0.00	3869.62	136.46	1.00	39574342.
27	-86.67	0.00	3869.62	136.46	1.00	39574342.
28	-95.00	0.00	3869.62	136.46	1.00	39574342.
29	-103.33	0.00	3869.62	136.46	1.00	39574342.
30	-111.67	0.00	3869.62	136.46	1.00	39574342.
31	-120.00	0.00	2512.19	83.06	1.00	22580864.
32	-128.89	0.00	2512.19	83.06	1.00	22580864.
33	-137.78	0.00	2512.19	83.06	1.00	22580864.
34	-146.67	0.00	2512.19	83.06	1.00	22580864.
35	-155.56	0.00	2512.19	83.06	1.00	22580864.
36	-164.44	0.00	2512.19	83.06	1.00	22580864.
37	-173.33	0.00	2512.19	83.06	1.00	22580864.
38	-182.22	0.00	2512.19	83.06	1.00	22580864.
39	-191.11	1000.00	2512.19	83.06	1.00	22580864.

PROB 1 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.025, MINIMUM WALL THICKNESS=.75 IN. RU = 14

TABLE 8 -- MAXIMUM STRESS DATA

TIP RESISTANCE PERCENTAGE = 14.00

PERMANENT SET OF PILE = .0318 INCHES
NUMBER OF BLOWS PER FOOT = 377.08
TOTAL INTERVALS = 155

SEG	ELEV FT	MAX C STRESS LBS/SQ.IN.	TIME N	MAX T STRESS LBS/SQ.IN.	TIME N	AREA SQ.IN.	DMAX(M) IN.	D(M) IN.	V(M) FT/SEC
1	0.00	1781801.	36	0.	86	1.000	1.195696	1.179398	-.72
2	0.00	1481608.	48	0.	0	1.000	.783900	.733771	-.49
3	120.00	10889.	50	0.	0	136.463	.770099	.716667	-.49
4	111.00	10927.	53	0.	0	136.463	.761915	.705719	-.52
5	102.00	11005.	56	0.	0	136.463	.753255	.694367	-.59
6	93.00	11162.	59	0.	0	136.463	.744311	.682629	-.68
7	84.00	11343.	62	0.	0	136.463	.735185	.670450	-.83
8	75.00	11533.	65	0.	0	136.463	.725968	.657722	-1.00
9	66.00	11715.	67	0.	0	136.463	.716689	.644401	-1.17
10	57.00	11879.	70	0.	0	136.463	.706968	.630581	-1.34
11	48.00	12016.	72	0.	0	136.463	.696425	.616248	-1.48
12	39.00	12133.	75	0.	0	136.463	.684835	.601551	-1.58
13	30.00	10268.	78	0.	0	162.578	.672102	.586582	-1.67
14	21.67	10391.	80	0.	0	162.578	.661195	.574680	-1.75
15	13.33	10540.	83	0.	0	162.578	.649429	.562380	-1.83
16	5.00	10698.	85	0.	0	162.578	.636833	.549547	-1.89
17	-3.33	10807.	88	0.	0	162.578	.623334	.536290	-1.93
18	-11.67	10848.	90	0.	0	162.578	.608663	.522622	-1.97
19	-20.00	10864.	93	0.	0	162.578	.592642	.508247	-2.03
20	-28.33	10845.	96	0.	0	162.578	.575210	.493099	-2.07
21	-36.67	10749.	98	0.	0	162.578	.556487	.477238	-2.11
22	-45.00	10550.	101	0.	0	162.578	.536834	.460492	-2.16
23	-53.33	10258.	103	0.	0	162.578	.516758	.442860	-2.16
24	-61.67	9994.	107	0.	0	162.578	.496101	.424660	-2.16
25	-70.00	11629.	110	0.	0	136.463	.474837	.405811	-2.14
26	-78.33	11315.	113	0.	0	136.463	.449487	.382993	-2.04
27	-86.67	10807.	114	0.	0	136.463	.423651	.360151	-1.95
28	-95.00	10195.	118	0.	0	136.463	.397447	.337332	-1.87
29	-103.33	9596.	122	0.	0	136.463	.370251	.314778	-1.79
30	-111.67	9137.	124	0.	0	136.463	.342421	.292453	-1.69
31	-120.00	14165.	129	0.	0	83.056	.313907	.270606	-1.59
32	-128.89	13277.	132	0.	0	83.056	.266438	.233646	-1.43
33	-137.78	12117.	133	0.	0	83.056	.222996	.198925	-1.26
34	-146.67	10631.	135	0.	0	83.056	.183482	.167047	-1.09
35	-155.56	9125.	139	0.	0	83.056	.147975	.138175	-.93
36	-164.44	7626.	141	0.	0	83.056	.117698	.112485	-.72
37	-173.33	[illegible]	149	0.	0	83.056	.092389	[illegible]	[illegible]

39 -191.11 4177. 141 0. 0 83.056 .056824 .056640 -.18

PROB 1 36-IN. DIAMETER PILES 3-PILE STRUCTURE

200FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.025, MINIMUM WALL THICKNESS=.75 IN. RU = 14

TABLE 9 -- RESISTANCE-BLOW CURVE DATA

TIP RESISTANCE PERCENTAGE = 14.00

BLOWS/FT.	RESISTANCE TOTAL-TONS	DYNAMIC PT FORCE-TONS	MAX C STRESS LBS/SQ.IN.	SEG NO.	MAX T STRESS LBS/SQ.IN.	SEG NO.
2.63	50.	21.89	13374.	31	12495.	31
4.09	100.	41.15	13888.	31	10219.	31
6.47	150.	57.92	14047.	31	8105.	31
8.84	200.	72.55	14137.	31	6203.	31
11.86	250.	85.35	14205.	31	4509.	31
14.30	300.	96.54	14267.	31	2995.	31
16.20	350.	106.35	14325.	31	1640.	31
18.42	400.	114.91	14373.	31	461.	32
21.07	450.	122.42	14422.	31	0.	39
24.27	500.	128.99	14460.	31	0.	39
28.16	550.	134.72	14495.	31	0.	39
32.98	600.	139.57	14526.	31	0.	39
39.06	650.	143.65	14545.	31	0.	39
46.87	700.	146.96	14557.	31	0.	39
57.12	750.	149.73	14559.	31	0.	39
70.93	800.	151.77	14544.	31	0.	39
90.23	850.	152.82	14517.	31	0.	39
117.64	900.	156.45	14467.	31	0.	39
156.08	950.	161.66	14403.	31	0.	39
205.31	1000.	166.27	14331.	31	0.	39
273.06	1050.	170.01	14253.	31	0.	39
377.08	1100.	173.46	14165.	31	0.	39

PROB 1 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.025,MINIMUM WALL THICKNESS=.75 IN. RU = 14

TABLE 10 -- SPECIFIED BLOW DATA

TIP RESISTANCE PERCENTAGE = 14.00

BLOWS PER FOOT	RESISTANCE TONS
156.08	950.
205.31	1000.
273.06	1050.
295.60	1063.

WAVE EQUATION ANALYSIS FOR 36-IN. DIAMETER PIPE PILES
MC CLELLAND REPORT DATA FOR ACMR 3-PILE STRUCTURE -- BORING 1
APRIL 19 1976

PROB
2   36-IN. DIAMETER PILES 3-PILE STRUCTURE
     200FT PENETRATION -- VULCAN 040 HAMMER
     QTIP=.10,MINIMUM WALL THICKNESS=.75 IN.   RU = 35

TABLE 1 -- PROGRAM CONTROL DATA

PILE TYPE	1	
NEW HAMMER DATA OPTION	1	
NEW MATERIAL DATA OPTION	1	
NEW PILE SECTION DATA OPTION	1	
NEW SOIL DATA OPTION	1	
SPECIFIED BLOW COUNT OPTION	1	
OUTPUT OPTION FOR STRESS	1	
BPF FOR STRESS OUTPUT OPTION		275.
ULTIMATE RESISTANCE INCREMENT (TONS)		50.0
MAX BLOWS FOR RESISTANCE-BLOW CURVE (BPF)		300.
SPECIFIED SEGMENT LENGTH (FT)		-0.00

TABLE 2 -- HAMMER DATA

HAMMER DESCRIPTION	VULCAN 040 HAMMER
HAMMER EFFICIENCY	.75
HAMMER ENERGY (FT-LBS)	120000.00
HAMMER EXPLOSIVE FORCE (LBS)	-0.00
NUMBER OF HAMMER SEGMENTS	2

SEGMENT NUMBER	SLACK (IN)	WEIGHT (LB)	AREA (SQ IN)	COEF OF RESTITUTION	SPRING CONSTANT (LB / IN)
1	1000.00	40000.00	1.00	.60	2780000.00
2	1000.00	27800.00	1.00	.90	0.00

TABLE 3 -- MATERIAL DATA

NUMBER OF MATERIAL TYPES = 1

MATERIAL TYPE	(TOD)	UNIT WT. (PCF)	MODULUS (PSI)
1	36.000	490.0	29000000.

TABLE 4 -- PILE SECTION DATA

TOTAL NUMBER OF PILE SECTIONS	4
NUMBER OF SECTIONS CHANGED	0
NUMBER OF SECTIONS ADDED	0
LENGTH OF FREE STANDING PILE(FT)	120.00

SECTION NUMBER	MATERIAL TYPE	WALL THICKNESS (IN)	LENGTH (FT)	STATION NUMBER TOP	STATION NUMBER BOTTOM
1	1	1.250	90.	0	90
2	1	1.500	100.	90	190
3	1	1.250	50.	190	240
4	1	.750	80.	240	320

TABLE 5 -- SOIL DATA

NUMBER OF TIP RESISTANCE PERCENTAGES	1
SIDE DAMPENING RESISTANCE = JSIDE	.15
POINT DAMPENING RESISTANCE = JPOINT	.15
SOIL QUAKE FOR SIDE = QSIDE	.10
SOIL QUAKE FOR POINT = QPOINT	.10

TIP RESISTANCE PERCENTAGE
35.0000

TABLE 6 -- SPECIFIED BLOW COUNT DATA

NUMBER OF SPECIFIED BLOW COUNTS 4

BLOWS PER FOOT	TOLERANCE
150.	25.
200.	25.
250.	25.
300.	25.

PROB 2 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.10,MINIMUM WALL THICKNESS=.75 IN. RU = 35

TABLE 7 -- PILE SEGMENT DATA

SEGMENT	ELEV FT	SLACK IN.	WEIGHT LBS	AREA SQ.IN.	COEF RSTITU	SPR STIFF LBS/IN.
1	0.00	1000.00	40000.00	1.00	.60	2780000.
2	0.00	1000.00	27800.00	1.00	.90	36642910.
3	120.00	0.00	4179.19	136.46	1.00	36642910.
4	111.00	0.00	4179.19	136.46	1.00	36642910.
5	102.00	0.00	4179.19	136.46	1.00	36642910.
6	93.00	0.00	4179.19	136.46	1.00	36642910.
7	84.00	0.00	4179.19	136.46	1.00	36642910.
8	75.00	0.00	4179.19	136.46	1.00	36642910.
9	66.00	0.00	4179.19	136.46	1.00	36642910.
10	57.00	0.00	4179.19	136.46	1.00	36642910.
11	48.00	0.00	4179.19	136.46	1.00	36642910.
12	39.00	0.00	4179.19	136.46	1.00	36642910.
13	30.00	0.00	4610.13	162.58	1.00	47147562.
14	21.67	0.00	4610.13	162.58	1.00	47147562.
15	13.33	0.00	4610.13	162.58	1.00	47147562.
16	5.00	0.00	4610.13	162.58	1.00	47147562.
17	-3.33	0.00	4610.13	162.58	1.00	47147562.
18	-11.67	0.00	4610.13	162.58	1.00	47147562.
19	-20.00	0.00	4610.13	162.58	1.00	47147562.
20	-28.33	0.00	4610.13	162.58	1.00	47147562.
21	-36.67	0.00	4610.13	162.58	1.00	47147562.
22	-45.00	0.00	4610.13	162.58	1.00	47147562.
23	-53.33	0.00	4610.13	162.58	1.00	47147562.
24	-61.67	0.00	4610.13	162.58	1.00	47147562.
25	-70.00	0.00	3869.62	136.46	1.00	39574342.
26	-78.33	0.00	3869.62	136.46	1.00	39574342.
27	-86.67	0.00	3869.62	136.46	1.00	39574342.
28	-95.00	0.00	3869.62	136.46	1.00	39574342.
29	-103.33	0.00	3869.62	136.46	1.00	39574342.
30	-111.67	0.00	3869.62	136.46	1.00	39574342.
31	-120.00	0.00	2512.19	83.06	1.00	22580864.
32	-128.89	0.00	2512.19	83.06	1.00	22580864.
33	-137.78	0.00	2512.19	83.06	1.00	22580864.
34	-146.67	0.00	2512.19	83.06	1.00	22580864.
35	-155.56	0.00	2512.19	83.06	1.00	22580864.
36	-164.44	0.00	2512.19	83.06	1.00	22580864.
37	-173.33	0.00	2512.19	83.06	1.00	22580864.
38	-182.22	0.00	2512.19	83.06	1.00	22580864.
39	-191.11	1000.00	2512.19	83.06	1.00	22580864.

PROB 2 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.10,MINIMUM WALL THICKNESS=.75 IN. RU = 35

TABLE 8 -- MAXIMUM STRESS DATA

TIP RESISTANCE PERCENTAGE = 35.00

PERMANENT SET OF PILE = .0337 INCHES
NUMBER OF BLOWS PER FOOT = 355.77
TOTAL INTERVALS = 159

SEG	ELEV FT	MAX C STRESS LBS/SQ.IN.	TIME N	MAX T STRESS LBS/SQ.IN.	TIME N	AREA SQ.IN.	DMAX(M) IN.	D(M) IN.	V(M) FT/SEC
1	0.00	1781801.	36	0.	86	1.000	1.213118	1.195109	-.59
2	0.00	1481608.	48	0.	0	1.000	.800812	.772794	-.08
3	120.00	10889.	50	0.	0	136.463	.787056	.759958	-.03
4	111.00	10927.	53	0.	0	136.463	.779014	.753663	.01
5	102.00	11005.	56	0.	0	136.463	.770689	.746867	.02
6	93.00	11162.	59	0.	0	136.463	.762406	.739543	-.03
7	84.00	11343.	62	0.	0	136.463	.754498	.731682	-.11
8	75.00	11533.	65	0.	0	136.463	.747345	.723369	-.22
9	66.00	11714.	67	0.	0	136.463	.740711	.714759	-.32
10	57.00	11877.	70	0.	0	136.463	.733959	.705953	-.43
11	48.00	12010.	72	0.	0	136.463	.726853	.697092	-.54
12	39.00	12114.	75	0.	0	136.463	.719362	.688063	-.66
13	30.00	10232.	77	0.	0	162.578	.711787	.678687	-.80
14	21.67	10318.	80	0.	0	162.578	.705937	.670957	-.90
15	13.33	10415.	82	0.	0	162.578	.699813	.662794	-.99
16	5.00	10516.	85	0.	0	162.578	.692933	.654224	-1.09
17	-3.33	10567.	87	0.	0	162.578	.685073	.645069	-1.20
18	-11.67	10557.	90	0.	0	162.578	.676191	.635221	-1.31
19	-20.00	10527.	92	0.	0	162.578	.666427	.624660	-1.43
20	-28.33	10478.	95	0.	0	162.578	.656044	.613178	-1.56
21	-36.67	10383.	97	0.	0	162.578	.644898	.600646	-1.69
22	-45.00	10209.	100	0.	0	162.578	.632862	.587026	-1.83
23	-53.33	9941.	102	0.	0	162.578	.620044	.572284	-1.94
24	-61.67	9636.	105	0.	0	162.578	.606305	.556530	-2.01
25	-70.00	11187.	108	0.	0	136.463	.591552	.539987	-2.04
26	-78.33	10902.	111	0.	0	136.463	.573055	.519741	-2.04
27	-86.67	10490.	113	0.	0	136.463	.553398	.499115	-2.01
28	-95.00	10030.	116	0.	0	136.463	.532331	.478149	-1.96
29	-103.33	9635.	120	0.	0	136.463	.509549	.456922	-1.94
30	-111.67	9324.	124	0.	0	136.463	.484986	.435283	-1.91
31	-120.00	14659.	127	0.	0	83.056	.458640	.413292	-1.88
32	-128.89	14258.	132	0.	0	83.056	.412506	.374397	-1.82
33	-137.78	13909.	133	0.	0	83.056	.367685	.335564	-1.68
34	-146.67	13379.	135	0.	0	83.056	.323984	.297846	-1.45
35	-155.56	12552.	138	0.	0	83.056	.281191	.261838	-1.20
36	-164.44	11790.	143	0.	0	83.056	.238792	.227577	-.99
37	-173.33	11267.	145	0.	0	83.056	.199338	.194554	-.73
38	-182.22	10331.	144	0.	0	83.056	.164649	.163309	-.45
39	-191.11	8905.	145	0.	0	83.056	.133730	.133619	-.18

39 -191.11 4905. 145 0. 0 83.056 .133730 .133615 -.18

PROB 2 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.10,MINIMUM WALL THICKNESS=.75 IN. RU = 35

TABLE 9 -- RESISTANCE-BLOW CURVE DATA

TIP RESISTANCE PERCENTAGE = 55.00

BLOWS/FT.	RESISTANCE TOTAL-TONS	DYNAMIC PT FORCE-TONS	MAX C STRESS LBS/SQ.IN.	SEG NO.	MAX T STRESS LBS/SQ.IN.	SEG NO.
2.56	50.	54.41	13487.	31	12072.	31
4.08	100.	101.75	14104.	31	9414.	31
6.70	150.	142.42	14188.	31	6973.	31
9.42	200.	177.60	14252.	31	4828.	31
13.29	250.	208.12	14304.	31	2942.	31
15.93	300.	234.67	14348.	31	1338.	6
18.41	350.	257.79	14397.	31	387.	12
21.43	400.	277.95	14435.	31	146.	12
25.14	450.	295.50	14473.	31	48.	5
29.84	500.	310.69	14509.	31	0.	39
35.89	550.	323.81	14537.	31	0.	39
43.89	600.	335.24	14568.	31	0.	39
54.77	650.	345.04	14591.	31	0.	39
70.19	700.	352.96	14615.	31	0.	39
93.31	750.	359.27	14631.	31	0.	39
130.74	800.	364.57	14646.	31	0.	39
199.58	850.	368.69	14653.	31	0.	39
355.77	900.	369.81	14659.	31	0.	39

PROB 2 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.10,MINIMUM WALL THICKNESS=.75 IN. RU = 35

TABLE 10 -- SPECIFIED BLOW DATA

TIP RESISTANCE PERCENTAGE = 35.00

BLOWS PER FOOT	RESISTANCE TONS
130.74	800.
199.58	850.
235.38	866.
282.16	882.

WAVE EQUATION ANALYSIS FOR 36-IN. DIAMETER PIPE PILES
MC CLELLAND REPORT DATA FOR ACMR 3-PILE STRUCTURE -- BORING 1
APRIL 19 1976

PROB
3   36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 040 HAMMER
QTYP=.30, MINIMUM WALL THICKNESS=.75 IN.   RU = 50

TABLE 1 -- PROGRAM CONTROL DATA

PILE TYPE	1	
NEW HAMMER DATA OPTION	1	
NEW MATERIAL DATA OPTION	1	
NEW PILE SECTION DATA OPTION	1	
NEW SOIL DATA OPTION	1	
SPECIFIED BLOW COUNT OPTION	1	
OUTPUT OPTION FOR STRESS	1	
BPF FOR STRESS OUTPUT OPTION		275.
ULTIMATE RESISTANCE INCREMENT (TONS)		50.0
MAX BLOWS FOR RESISTANCE-BLOW CURVE (BPF)		300.
SPECIFIED SEGMENT LENGTH (FT)		-0.00

TABLE 2 -- HAMMER DATA

HAMMER DESCRIPTION	VULCAN 040 HAMMER
HAMMER EFFICIENCY	.75
HAMMER ENERGY (FT-LBS)	120000.00
HAMMER EXPLOSIVE FORCE (LBS)	-0.00
NUMBER OF HAMMER SEGMENTS	2

SEGMENT NUMBER	SLACK (IN)	WEIGHT (LB)	AREA (SQ IN)	COEF OF RESTITUTION	SPRING CONSTANT (LB / IN)
1	1000.00	40000.00	1.00	.60	2780000.00
2	1000.00	27800.00	1.00	.90	0.00

TABLE 3 -- MATERIAL DATA

NUMBER OF MATERIAL TYPES = 1

MATERIAL TYPE	(TOD)	UNIT WT. (PCF)	MODULUS (PSI)
1	36.000	490.0	29000000.

TABLE 4 -- PILE SECTION DATA

TOTAL NUMBER OF PILE SECTIONS 4

NUMBER OF SECTIONS CHANGED 0
NUMBER OF SECTIONS ADDED 0
LENGTH OF FREE STANDING PILE(FT) 120.00

SECTION NUMBER	MATERIAL TYPE	WALL THICKNESS (IN)	LENGTH (FT)	STATION NUMBER TOP	STATION NUMBER BOTTOM
1	1	1.250	90.	0	90
2	1	1.500	100.	90	190
3	1	1.250	50.	190	240
4	1	.750	80.	240	320

TABLE 5 -- SOIL DATA

NUMBER OF TIP RESISTANCE PERCENTAGES 1
SIDE DAMPENING RESISTANCE = JSIDE .15
POINT DAMPENING RESISTANCE = JPOINT .15
SOIL QUAKE FOR SIDE = QSIDE .10
SOIL QUAKE FOR POINT = QPOINT .30

TIP RESISTANCE PERCENTAGE
50.0000

TABLE 6 -- SPECIFIED BLOW COUNT DATA

NUMBER OF SPECIFIED BLOW COUNTS 4

BLOWS PER FOOT	TOLERANCE
150.	25.
200.	25.
250.	25.
300.	25.

PROB 3 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.30, MINIMUM WALL THICKNESS=.75 IN. RU = 50

TABLE 7 -- PILE SEGMENT DATA

SEGMENT	ELEV FT	SLACK IN.	WEIGHT LBS	AREA SQ.IN.	COEF RSTITU	SPR STIFF LBS/IN.
1	0.00	1000.00	40000.00	1.00	.60	2780000.
2	0.00	1000.00	27800.00	1.00	.90	36642910.
3	120.00	0.00	4179.19	136.46	1.00	36642910.
4	111.00	0.00	4179.19	136.46	1.00	36642910.
5	102.00	0.00	4179.19	136.46	1.00	36642910.
6	93.00	0.00	4179.19	136.46	1.00	36642910.
7	84.00	0.00	4179.19	136.46	1.00	36642910.
8	75.00	0.00	4179.19	136.46	1.00	36642910.
9	66.00	0.00	4179.19	136.46	1.00	36642910.
10	57.00	0.00	4179.19	136.46	1.00	36642910.
11	48.00	0.00	4179.19	136.46	1.00	36642910.
12	39.00	0.00	4179.19	136.46	1.00	36642910.
13	30.00	0.00	4610.13	162.58	1.00	47147562.
14	21.67	0.00	4610.13	162.58	1.00	47147562.
15	13.33	0.00	4610.13	162.58	1.00	47147562.
16	5.00	0.00	4610.13	162.58	1.00	47147562.
17	-3.33	0.00	4610.13	162.58	1.00	47147562.
18	-11.67	0.00	4610.13	162.58	1.00	47147562.
19	-20.00	0.00	4610.13	162.58	1.00	47147562.
20	-28.33	0.00	4610.13	162.58	1.00	47147562.
21	-36.67	0.00	4610.13	162.58	1.00	47147562.
22	-45.00	0.00	4610.13	162.58	1.00	47147562.
23	-53.33	0.00	4610.13	162.58	1.00	47147562.
24	-61.67	0.00	4610.13	162.58	1.00	47147562.
25	-70.00	0.00	3869.62	136.46	1.00	39574342.
26	-78.33	0.00	3869.62	136.46	1.00	39574342.
27	-86.67	0.00	3869.62	136.46	1.00	39574342.
28	-95.00	0.00	3869.62	136.46	1.00	39574342.
29	-103.33	0.00	3869.62	136.46	1.00	39574342.
30	-111.67	0.00	3869.62	136.46	1.00	39574342.
31	-120.00	0.00	2512.19	83.06	1.00	22580864.
32	-128.89	0.00	2512.19	83.06	1.00	22580864.
33	-137.78	0.00	2512.19	83.06	1.00	22580864.
34	-146.67	0.00	2512.19	83.06	1.00	22580864.
35	-155.56	0.00	2512.19	83.06	1.00	22580864.
36	-164.44	0.00	2512.19	83.06	1.00	22580864.
37	-173.33	0.00	2512.19	83.06	1.00	22580864.
38	-182.22	0.00	2512.19	83.06	1.00	22580864.
39	-191.11	1000.00	2512.19	83.06	1.00	22580864.

PROB 5 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.30, MINIMUM WALL THICKNESS=.75 IN. RU = 50

TABLE A -- MAXIMUM STRESS DATA

TIP RESISTANCE PERCENTAGE = 50.00

PERMANENT SET OF PILE = .0203 INCHES
NUMBER OF BLOWS PER FOOT = 590.68
TOTAL INTERVALS = 162

SEG	ELEV FT	MAX C STRESS LBS/SQ.IN.	TIME N	MAX T STRESS LBS/SQ.IN.	TIME N	AREA SQ.IN.	DMAX(M) IN.	D(M) IN.	V(M) FT/SEC
1	0.00	1781801.	36	0.	162	1.000	1.240638	1.223526	-12.04
2	0.00	1481608.	48	0.	0	1.000	.828015	.818145	.22
3	120.00	10889.	50	0.	0	136.463	.814294	.808768	.30
4	111.00	10927.	53	0.	0	136.463	.806497	.806497	.38
5	102.00	11005.	56	0.	0	136.463	.803675	.803675	.42
6	93.00	11162.	59	0.	0	136.463	.800235	.800235	.45
7	84.00	11343.	62	0.	0	136.463	.796287	.796287	.44
8	75.00	11532.	65	0.	0	136.463	.791986	.791986	.42
9	66.00	11714.	67	0.	0	136.463	.787506	.787506	.37
10	57.00	11876.	70	0.	0	136.463	.782954	.782954	.29
11	48.00	12006.	72	0.	0	136.463	.778297	.778297	.18
12	39.00	12102.	75	0.	0	136.463	.773462	.773462	.05
13	30.00	10211.	77	0.	0	162.578	.768821	.768357	-.07
14	21.67	10274.	80	0.	0	162.578	.766087	.764159	-.16
15	13.33	10346.	82	0.	0	162.578	.763462	.759657	-.25
16	5.00	10408.	85	0.	0	162.578	.760564	.754753	-.35
17	-3.33	10427.	87	0.	0	162.578	.757123	.749418	-.44
18	-11.67	10388.	89	0.	0	162.578	.753073	.743598	-.54
19	-20.00	10333.	92	0.	0	162.578	.748403	.737194	-.66
20	-28.33	10259.	94	0.	0	162.578	.743068	.730086	-.80
21	-36.67	10164.	97	0.	0	162.578	.737023	.722031	-.96
22	-45.00	10000.	99	0.	0	162.578	.730271	.712847	-1.12
23	-53.33	9744.	101	0.	0	162.578	.722704	.702549	-1.26
24	-61.67	9420.	104	0.	0	162.578	.714197	.691288	-1.34
25	-70.00	10900.	107	0.	0	136.463	.704650	.679288	-1.37
26	-78.33	10595.	109	0.	0	136.463	.692129	.664531	-1.38
27	-86.67	10222.	111	0.	0	136.463	.678116	.649473	-1.38
28	-95.00	9826.	115	0.	0	136.463	.662374	.633997	-1.40
29	-103.33	9504.	118	0.	0	136.463	.644997	.617845	-1.44
30	-111.67	9246.	122	0.	0	136.463	.626165	.600854	-1.50
31	-120.00	14612.	123	0.	0	83.056	.606420	.582926	-1.51
32	-128.89	13894.	126	0.	0	83.056	.572248	.550985	-1.51
33	-137.78	13493.	132	0.	0	83.056	.538100	.518649	-1.48
34	-146.67	13270.	134	0.	0	83.056	.502801	.485735	-1.44
35	-155.56	12767.	135	0.	0	83.056	.466422	.452434	-1.31
36	-164.44	12090.	139	0.	0	83.056	.429269	.419190	-1.11
37	-173.33	11952.	143	0.	0	83.056	.391548	.386115	-.83
38	-182.22	11761.	147	0.	0	83.056	.354822	.353249	-.52

PROB 3 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 040 HAMMER

QTIPE,30, MINIMUM WALL THICKNESS=.75 IN. RU = 50

TABLE 9 -- RESISTANCE-BLOW CURVE DATA

TIP RESISTANCE PERCENTAGE = 50.00

BLOWS/FT.	RESISTANCE TOTAL-TONS	DYNAMIC PT FORCE-TONS	MAX C STRESS LBS/SQ.IN.	SEG NO.	MAX T STRESS LBS/SQ.IN.	SEG NO.
2.49	50.	77.43	13574.	31	11778.	31
4.16	100.	144.24	14214.	31	8846.	31
6.98	150.	201.14	14278.	31	6237.	31
10.65	200.	250.01	14319.	31	3960.	31
16.12	250.	292.27	14363.	31	1994.	31
20.03	300.	328.70	14400.	31	944.	12
24.23	350.	360.11	14432.	31	742.	12
29.66	400.	387.15	14459.	31	545.	12
36.92	450.	411.06	14490.	31	355.	12
46.98	500.	431.71	14518.	31	172.	11
61.75	550.	448.48	14540.	31	82.	3
85.22	600.	465.90	14558.	31	9.	3
127.38	650.	477.65	14580.	41	0.	39
221.86	700.	482.82	14599.	31	0.	39
590.68	750.	475.16	14612.	31	0.	39

PROB 3 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.30, MINIMUM WALL THICKNESS=.75 IN. RU = 50

TABLE 10 -- SPECIFIED BLOW DATA

TIP RESISTANCE PERCENTAGE = 50.00

BLOWS PER FOOT	RESISTANCE TONS
127.38	650.
221.86	700.
234.06	704.
279.84	715.

```
WAVE EQUATION ANALYSIS FOR 36-IN. DIAMETER PIPE PILES
MC CLELLAND REPORT DATA FOR ACMR 3-PILE STRUCTURE -- BORING 1
APRIL 19 1976

 PROB
   4      36-IN. DIAMETER PILES 3-PILE STRUCTURE
          200FT PENETRATION -- VULCAN 040 HAMMER
          QTIP=.025,MINIMUM WALL THICKNESS=1.25 IN.     RU = 14

TABLE 1 -- PROGRAM CONTROL DATA

     PILE TYPE                              1
     NEW HAMMER DATA OPTION                 1
     NEW MATERIAL DATA OPTION               1
     NEW PILE SECTION DATA OPTION           1
     NEW SOIL DATA OPTION                   1
     SPECIFIED BLOW COUNT OPTION            1
     OUTPUT OPTION FOR STRESS               1
     BPF FOR STRESS OUTPUT OPTION                          275.
     ULTIMATE RESISTANCE INCREMENT (TONS)                  50.0
     MAX BLOWS FOR RESISTANCE-BLOW CURVE (BPF)             300.
     SPECIFIED SEGMENT LENGTH (FT)                         -0.00

TABLE 2 -- HAMMER DATA

     HAMMER DESCRIPTION             VULCAN 040 HAMMER
     HAMMER EFFICIENCY                     .75
     HAMMER ENERGY (FT-LBS)          120000.00
     HAMMER EXPLOSIVE FORCE (LBS)        -0.00
     NUMBER OF HAMMER SEGMENTS               2

     SEGMENT     SLACK      WEIGHT      AREA    COEF OF    SPRING CONSTANT
      NUMBER     (IN)        (LB)     (SQ IN) RESTITUTION    (LB / IN)

        1       1000.00  40000.00      1.00       .60       2780000.00
        2       1000.00  27800.00      1.00       .90             0.00

TABLE 3 -- MATERIAL DATA

     NUMBER OF MATERIAL TYPES =    1

         MATERIAL      (TUD)    UNIT WT.   MODULUS
           TYPE                  (PCF)      (PSI)

             1         36.000     490.0 29000000.

TABLE 4 -- PILE SECTION DATA

     TOTAL NUMBER OF PILE SECTIONS      3
```

WAVE EQUATION ANALYSIS FOR 36-IN. DIAMETER PIPE PILES
MC CLELLAND REPORT DATA FOR ACMR 3-PILE STRUCTURE -- BORING 1
APRIL 19 1976

PROB
4 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 040 HAMMER
QTIP=.025,MINIMUM WALL THICKNESS=1.25 IN. RU = 14

TABLE 1 -- PROGRAM CONTROL DATA

PILE TYPE	1	
NEW HAMMER DATA OPTION	1	
NEW MATERIAL DATA OPTION	1	
NEW PILE SECTION DATA OPTION	1	
NEW SOIL DATA OPTION	1	
SPECIFIED BLOW COUNT OPTION	1	
OUTPUT OPTION FOR STRESS	1	
BPF FOR STRESS OUTPUT OPTION		275.
ULTIMATE RESISTANCE INCREMENT (TONS)		50.0
MAX BLOWS FOR RESISTANCE-BLOW CURVE (BPF)		300.
SPECIFIED SEGMENT LENGTH (FT)		-0.00

TABLE 2 -- HAMMER DATA

HAMMER DESCRIPTION	VULCAN 040 HAMMER
HAMMER EFFICIENCY	.75
HAMMER ENERGY (FT-LBS)	120000.00
HAMMER EXPLOSIVE FORCE (LBS)	-0.00
NUMBER OF HAMMER SEGMENTS	2

SEGMENT NUMBER	SLACK (IN)	WEIGHT (LB)	AREA (SQ IN)	COEF OF RESTITUTION	SPRING CONSTANT (LB / IN)
1	1000.00	40000.00	1.00	.60	2780000.00
2	1000.00	27800.00	1.00	.90	0.00

TABLE 3 -- MATERIAL DATA

NUMBER OF MATERIAL TYPES = 1

MATERIAL TYPE	(TOD)	UNIT WT. (PCF)	MODULUS (PSI)
1	36.000	490.0	29000000.

TABLE 4 -- PILE SECTION DATA

TOTAL NUMBER OF PILE SECTIONS 3

NUMBER OF SECTIONS ADDED 0
LENGTH OF FREE STANDING PILE(FT) 120.00

SECTION NUMBER	MATERIAL TYPE	WALL THICKNESS (IN)	LENGTH (FT)	STATION NUMBER TOP	BOTTOM
1	1	1.250	90.	0	90
2	1	1.500	100.	90	190
3	1	1.250	130.	190	320

TABLE 5 -- SOIL DATA

NUMBER OF TIP RESISTANCE PERCENTAGES 1
SIDE DAMPENING RESISTANCE = JSIDE .15
POINT DAMPENING RESISTANCE = JPONT .15
SOIL QUAKE FOR SIDE = QSIDE .10
SOIL QUAKE FOR POINT = QPOINT .03

TIP RESISTANCE PERCENTAGE

14.0000

TABLE 6 -- SPECIFIED BLOW COUNT DATA

NUMBER OF SPECIFIED BLOW COUNTS 4

BLOWS PER FOOT	TOLERANCE
150.	25.
200.	25.
250.	25.
300.	25.

PROB 4 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.025,MINIMUM WALL THICKNESS=1.25 IN. RU = 14

TABLE 7 -- PILE SEGMENT DATA

SEGMENT	ELEV FT	SLACK IN.	WEIGHT LBS	AREA SQ.IN.	COEF RSTITU	SPR STIFF LBS/IN.
1	0.00	1000.00	40000.00	1.00	.60	2780000.
2	0.00	1000.00	27800.00	1.00	.90	36642910.
3	120.00	0.00	4179.19	136.46	1.00	36642910.
4	111.00	0.00	4179.19	136.46	1.00	36642910.
5	102.00	0.00	4179.19	136.46	1.00	36642910.
6	93.00	0.00	4179.19	136.46	1.00	36642910.
7	84.00	0.00	4179.19	136.46	1.00	36642910.
8	75.00	0.00	4179.19	136.46	1.00	36642910.
9	66.00	0.00	4179.19	136.46	1.00	36642910.
10	57.00	0.00	4179.19	136.46	1.00	36642910.
11	48.00	0.00	4179.19	136.46	1.00	36642910.
12	39.00	0.00	4179.19	136.46	1.00	36642910.
13	30.00	0.00	4610.13	162.58	1.00	47147562.
14	21.67	0.00	4610.13	162.58	1.00	47147562.
15	13.33	0.00	4610.13	162.58	1.00	47147562.
16	5.00	0.00	4610.13	162.58	1.00	47147562.
17	-3.33	0.00	4610.13	162.58	1.00	47147562.
18	-11.67	0.00	4610.13	162.58	1.00	47147562.
19	-20.00	0.00	4610.13	162.58	1.00	47147562.
20	-28.33	0.00	4610.13	162.58	1.00	47147562.
21	-36.67	0.00	4610.13	162.58	1.00	47147562.
22	-45.00	0.00	4610.13	162.58	1.00	47147562.
23	-53.33	0.00	4610.13	162.58	1.00	47147562.
24	-61.67	0.00	4610.13	162.58	1.00	47147562.
25	-70.00	0.00	4024.40	136.46	1.00	38052252.
26	-78.67	0.00	4024.40	136.46	1.00	38052252.
27	-87.33	0.00	4024.40	136.46	1.00	38052252.
28	-96.00	0.00	4024.40	136.46	1.00	38052252.
29	-104.67	0.00	4024.40	136.46	1.00	38052252.
30	-113.33	0.00	4024.40	136.46	1.00	38052252.
31	-122.00	0.00	4024.40	136.46	1.00	38052252.
32	-130.67	0.00	4024.40	136.46	1.00	38052252.
33	-139.33	0.00	4024.40	136.46	1.00	38052252.
34	-148.00	0.00	4024.40	136.46	1.00	38052252.
35	-156.67	0.00	4024.40	136.46	1.00	38052252.
36	-165.33	0.00	4024.40	136.46	1.00	38052252.
37	-174.00	0.00	4024.40	136.46	1.00	38052252.
38	-182.67	0.00	4024.40	136.46	1.00	38052252.
39	-191.33	1000.00	4024.40	136.46	1.00	38052252.

PROB 4 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.025,MINIMUM WALL THICKNESS=1.25 IN. RU = 14

TABLE 8 -- MAXIMUM STRESS DATA

TIP RESISTANCE PERCENTAGE = 14.00

PERMANENT SET OF PILE = .0374 INCHES
NUMBER OF BLOWS PER FOOT = 321.13
TOTAL INTERVALS = 133

SEG	ELEV FT	MAX C STRESS LBS/SQ.IN.	TIME N	MAX T STRESS LBS/SQ.IN.	TIME N	AREA SQ.IN.	DMAX(M) IN.	D(M) IN.	V(M) FT/SEC
1	0.00	1781759.	31	0.	74	1.000	1.186375	1.170335	-.75
2	0.00	1482024.	41	0.	0	1.000	.774623	.717823	-.65
3	120.00	10888.	43	0.	0	136.463	.760820	.699075	-.72
4	111.00	10924.	46	0.	0	136.463	.752573	.686238	-.82
5	102.00	11003.	48	0.	0	136.463	.743825	.672741	-.94
6	93.00	11161.	51	0.	0	136.463	.734673	.658624	-1.07
7	84.00	11341.	53	0.	0	136.463	.725205	.643946	-1.22
8	75.00	11533.	56	0.	0	136.463	.715450	.628709	-1.40
9	66.00	11716.	58	0.	0	136.463	.705433	.612879	-1.57
10	57.00	11881.	60	0.	0	136.463	.694898	.596519	-1.75
11	48.00	12019.	62	0.	0	136.463	.683424	.579528	-1.91
12	39.00	12137.	65	0.	0	136.463	.670774	.561916	-2.06
13	30.00	10285.	67	0.	0	162.578	.656805	.543687	-2.19
14	21.67	10417.	69	0.	0	162.578	.644714	.529008	-2.28
15	13.33	10583.	72	0.	0	162.578	.631363	.513877	-2.34
16	5.00	10766.	74	0.	0	162.578	.616657	.498328	-2.38
17	-3.33	10896.	76	0.	0	162.578	.600433	.482435	-2.40
18	-11.67	10954.	78	0.	0	162.578	.582759	.466238	-2.39
19	-20.00	10977.	81	0.	0	162.578	.563660	.449612	-2.36
20	-28.33	10959.	83	0.	0	162.578	.543180	.432538	-2.33
21	-36.67	10876.	85	0.	0	162.578	.521364	.414934	-2.30
22	-45.00	10742.	88	0.	0	162.578	.498334	.396665	-2.27
23	-53.33	10577.	90	0.	0	162.578	.474189	.377657	-2.24
24	-61.67	10420.	93	0.	0	162.578	.448991	.357932	-2.21
25	-70.00	12144.	95	0.	0	136.463	.422863	.337563	-2.16
26	-78.67	11819.	98	0.	0	136.463	.390221	.311813	-2.05
27	-87.33	11434.	100	0.	0	136.463	.357682	.285952	-1.93
28	-96.00	10994.	103	0.	0	136.463	.325346	.260290	-1.79
29	-104.67	10478.	106	0.	0	136.463	.293348	.235299	-1.65
30	-113.33	9889.	109	0.	0	136.463	.261414	.210860	-1.51
31	-122.00	9369.	113	0.	0	136.463	.229448	.187538	-1.36
32	-130.67	8955.	115	0.	0	136.463	.197989	.165580	-1.21
33	-139.33	8389.	115	0.	0	136.463	.168331	.145497	-1.10
34	-148.00	7601.	115	0.	0	136.463	.141513	.127038	-.97
35	-156.67	6566.	117	0.	0	136.463	.118536	.110463	-.83
36	-165.33	5559.	118	0.	0	136.463	.100007	.095761	-.64
37	-174.00	4512.	117	0.	0	136.463	.084981	.083091	-.49
38	-182.67	3601.	115	0.	0	136.463	.072798	.071997	-.37
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

PROB 4 36-IN. DIAMETER PILES 5-PILE STRUCTURE
200FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.025,MINIMUM WALL THICKNESS=1.25 IN.   RU = 14

TABLE 9 -- RESISTANCE-BLOW CURVE DATA

TIP RESISTANCE PERCENTAGE = 14.00

BLOWS/FT.	RESISTANCE TOTAL-TONS	DYNAMIC PT FORCE-TONS	MAX C STRESS LBS/SQ.IN.	SEG NO.	MAX T STRESS LBS/SQ.IN.	SEG NO.
2.67	50.	19.41	11699.	11	10033.	25
4.17	100.	37.03	12042.	12	8682.	25
6.24	150.	52.96	12092.	12	7338.	25
8.55	200.	67.41	12094.	12	6104.	25
10.89	250.	80.51	12096.	12	4991.	26
13.68	300.	92.40	12098.	12	4116.	8
16.24	350.	103.17	12100.	12	3480.	8
18.14	400.	112.92	12102.	12	2169.	27
20.29	450.	121.74	12104.	12	1361.	28
22.76	500.	129.69	12106.	12	676.	30
25.61	550.	136.85	12108.	12	44.	32
28.94	600.	143.33	12110.	12	0.	39
32.87	650.	149.13	12112.	12	0.	39
37.59	700.	154.24	12114.	12	0.	39
43.30	750.	158.66	12116.	12	0.	39
50.32	800.	162.52	12118.	12	0.	39
59.09	850.	165.87	12120.	12	0.	39
70.25	900.	168.89	12122.	12	0.	39
84.64	950.	171.34	12123.	12	0.	39
103.53	1000.	173.00	12125.	12	0.	39
128.55	1050.	176.95	12127.	12	0.	39
160.80	1100.	181.92	12130.	12	0.	39
[illegible]	1150.	187.09	12132.	12	0.	39
[illegible]	1200.	192.35	12134.	12	0.	39
321.13	1250.	197.66	12144.	25	0.	39

PROB 4 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.025,MINIMUM WALL THICKNESS=1.25 IN. RU = 14

TABLE 10 -- SPECIFIED BLOW DATA.

THE RESISTANCE PERCENTAGE = 14.00

BLOWS PER FOOT	RESISTANCE TONS
128.55	1050.
200.17	1150.
250.96	1200.
321.13	1250.

WAVE EQUATION ANALYSIS FOR 36-IN. DIAMETER PIPE PILES
MC CLELLAND REPORT DATA FOR ACMP 3-PILE STRUCTURE -- BORING 1
APRIL 19 1976

PROB
5 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 040 HAMMER
QTIP=.10,MINIMUM WALL THICKNESS=1.25 IN. RU = 35

TABLE 1 -- PROGRAM CONTROL DATA

PILE TYPE	1
NEW HAMMER DATA OPTION	1
NEW MATERIAL DATA OPTION	1
NEW PILE SECTION DATA OPTION	1
NEW SOIL DATA OPTION	1
SPECIFIED BLOW COUNT OPTION	1
OUTPUT OPTION FOR STRESS	1
BPF FOR STRESS OUTPUT OPTION	275.
ULTIMATE RESISTANCE INCREMENT (TONS)	50.0
MAX BLOWS FOR RESISTANCE-BLOW CURVE (BPF)	300.
SPECIFIED SEGMENT LENGTH (FT)	-0.00

TABLE 2 -- HAMMER DATA

HAMMER DESCRIPTION	VULCAN 040 HAMMER
HAMMER EFFICIENCY	.75
HAMMER ENERGY (FT-LBS)	120000.00
HAMMER EXPLOSIVE FORCE (LBS)	-0.00
NUMBER OF HAMMER SEGMENTS	2

SEGMENT NUMBER	SLACK (IN)	WEIGHT (LB)	AREA (SQ IN)	COEF OF RESTITUTION	SPRING CONSTANT (LB / IN)
1	1000.00	40000.00	1.00	.60	2780000.00
2	1000.00	27800.00	1.00	.90	0.00

TABLE 3 -- MATERIAL DATA

NUMBER OF MATERIAL TYPES = 1

MATERIAL TYPE	(TOD)	UNIT WT. (PCF)	MODULUS (PSI)
1	36.000	490.0	29000000.

TABLE 4 -- PILE SECTION DATA

TOTAL NUMBER OF PILE SECTIONS 3

```
NUMBER OF SECTIONS CHANGED          0
NUMBER OF SECTIONS ADDED            0
LENGTH OF FREE STANDING PILE(FT)    120.00
```

SECTION NUMBER	MATERIAL TYPE	WALL THICKNESS (IN)	LENGTH (FT)	STATION NUMBER TOP	STATION NUMBER BOTTOM
1	1	1.250	90.	0	90
2	1	1.500	100.	90	190
3	1	1.250	130.	190	320

TABLE 5 -- SOIL DATA

```
NUMBER OF TIP RESISTANCE PERCENTAGES     1
SIDE DAMPENING RESISTANCE  - JSIDE       .15
POINT DAMPENING RESISTANCE - JPOINT      .15
SOIL QUAKE FOR SIDE        - QSIDE       .10
SOIL QUAKE FOR POINT       - QPOINT      .10
```

TIP RESISTANCE PERCENTAGE
35.0000

TABLE 6 -- SPECIFIED BLOW COUNT DATA

NUMBER OF SPECIFIED BLOW COUNTS 4

BLOWS PER FOOT	TOLERANCE
150.	25.
200.	25.
250.	25.
300.	25.

PROB 5 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.10,MINIMUM WALL THICKNESS=1.25 IN. RU = 35

TABLE 7 -- PILE SEGMENT DATA

SEGMENT	ELEV FT	SLACK IN.	WEIGHT LBS	AREA SQ.IN.	COEF RSTITU	SPR STIFF LBS/IN.
1	0.00	1000.00	40000.00	1.00	.60	2780000.
2	0.00	1000.00	27800.00	1.00	.90	36642910.
3	120.00	0.00	4179.19	136.46	1.00	36642910.
4	111.00	0.00	4179.19	136.46	1.00	36642910.
5	102.00	0.00	4179.19	136.46	1.00	36642910.
6	93.00	0.00	4179.19	136.46	1.00	36642910.
7	84.00	0.00	4179.19	136.46	1.00	36642910.
8	75.00	0.00	4179.19	136.46	1.00	36642910.
9	66.00	0.00	4179.19	136.46	1.00	36642910.
10	57.00	0.00	4179.19	136.46	1.00	36642910.
11	48.00	0.00	4179.19	136.46	1.00	36642910.
12	39.00	0.00	4179.19	136.46	1.00	36642910.
13	30.00	0.00	4610.13	162.58	1.00	47147562.
14	21.67	0.00	4610.13	162.58	1.00	47147562.
15	13.33	0.00	4610.13	162.58	1.00	47147562.
16	5.00	0.00	4610.13	162.58	1.00	47147562.
17	-3.33	0.00	4610.13	162.58	1.00	47147562.
18	-11.67	0.00	4610.13	162.58	1.00	47147562.
19	-20.00	0.00	4610.13	162.58	1.00	47147562.
20	-28.33	0.00	4610.13	162.58	1.00	47147562.
21	-36.67	0.00	4610.13	162.58	1.00	47147562.
22	-45.00	0.00	4610.13	162.58	1.00	47147562.
23	-53.33	0.00	4610.13	162.58	1.00	47147562.
24	-61.67	0.00	4610.13	162.58	1.00	47147562.
25	-70.00	0.00	4024.40	136.46	1.00	38052252.
26	-78.67	0.00	4024.40	136.46	1.00	38052252.
27	-87.33	0.00	4024.40	136.46	1.00	38052252.
28	-96.00	0.00	4024.40	136.46	1.00	38052252.
29	-104.67	0.00	4024.40	136.46	1.00	38052252.
30	-113.33	0.00	4024.40	136.46	1.00	38052252.
31	-122.00	0.00	4024.40	136.46	1.00	38052252.
32	-130.67	0.00	4024.40	136.46	1.00	38052252.
33	-139.33	0.00	4024.40	136.46	1.00	38052252.
34	-148.00	0.00	4024.40	136.46	1.00	38052252.
35	-156.67	0.00	4024.40	136.46	1.00	38052252.
36	-165.33	0.00	4024.40	136.46	1.00	38052252.
37	-174.00	0.00	4024.40	136.46	1.00	38052252.
38	-182.67	0.00	4024.40	136.46	1.00	38052252.
39	-191.33	1000.00	4024.40	136.46	1.00	38052252.

PROB 5 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.10,MINIMUM WALL THICKNESS=1.25 IN. RU = 35

TABLE B -- MAXIMUM STRESS DATA

TIP RESISTANCE PERCENTAGE = 35.00

PERMANENT SET OF PILE = .0356 INCHES
NUMBER OF BLOWS PER FOOT = 336.92
TOTAL INTERVALS = 137

SEG	ELEV FT	MAX C STRESS LBS/SQ.IN.	TIME N	MAX T STRESS LBS/SQ.IN.	TIME I	AREA SQ.IN.	DMAX(M) IN.	D(M) IN.	V(M) FT/SEC
1	0.00	1781759.	31	0.	74	1.000	1.200510	1.180993	-.66
2	0.00	1482024.	41	0.	0	1.000	.788225	.752172	-.30
3	120.00	10888.	43	0.	0	136.463	.774477	.736565	-.34
4	111.00	10924.	46	0.	0	136.463	.766380	.726966	-.39
5	102.00	11003.	48	0.	0	136.463	.757970	.716648	-.47
6	93.00	11161.	51	0.	0	136.463	.749476	.705634	-.57
7	84.00	11341.	53	0.	0	136.463	.741183	.693941	-.70
8	75.00	11533.	56	0.	0	136.463	.733325	.681609	-.84
9	66.00	11715.	58	0.	0	136.463	.725806	.668721	-1.01
10	57.00	11879.	60	0.	0	136.463	.718099	.655258	-1.18
11	48.00	12012.	62	0.	0	136.463	.709893	.641313	-1.35
12	39.00	12117.	64	0.	0	136.463	.701021	.626845	-1.51
13	30.00	10242.	67	0.	0	162.578	.691370	.611863	-1.65
14	21.67	10338.	69	0.	0	162.578	.683052	.599807	-1.73
15	13.33	10450.	71	0.	0	162.578	.673714	.587356	-1.80
16	5.00	10566.	73	0.	0	162.578	.663257	.574608	-1.85
17	-3.33	10635.	75	0.	0	162.578	.651550	.561600	-1.88
18	-11.67	10636.	78	0.	0	162.578	.638581	.548343	-1.89
19	-20.00	10620.	80	0.	0	162.578	.624308	.534857	-1.90
20	-28.33	10573.	82	0.	0	162.578	.608644	.521012	-1.91
21	-36.67	10493.	84	0.	0	162.578	.591736	.506647	-1.94
22	-45.00	10387.	87	0.	0	162.578	.573520	.491593	-1.99
23	-53.33	10274.	90	0.	0	162.578	.554098	.475692	-2.05
24	-61.67	10184.	92	0.	0	162.578	.533648	.458872	-2.08
25	-70.00	11978.	95	0.	0	136.463	.512360	.441301	-2.08
26	-78.67	11795.	97	0.	0	136.463	.485718	.418939	-2.05
27	-87.33	11571.	99	0.	0	136.463	.459094	.396222	-1.99
28	-96.00	11308.	102	0.	0	136.463	.432716	.373285	-1.91
29	-104.67	10998.	104	0.	0	136.463	.405850	.350297	-1.84
30	-113.33	10600.	106	0.	0	136.463	.377799	.327332	-1.76
31	-122.00	10099.	108	0.	0	136.463	.348465	.304310	-1.70
32	-130.67	9787.	113	0.	0	136.463	.318416	.281138	-1.63
33	-139.33	9750.	116	0.	0	136.463	.288417	.258012	-1.50
34	-148.00	9514.	118	0.	0	136.463	.259263	.235668	-1.28
35	-156.67	9056.	117	0.	0	136.463	.231088	.214599	-1.11
36	-165.33	8542.	119	0.	0	136.463	.203331	.194154	-.95
37	-174.00	7977.	124	0.	0	136.463	.178446	.174065	-.76
38	-182.67	7454.	123	0.	0	136.463	.156116	.154515	-.52

PROB 5 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.10,MINIMUM WALL THICKNESS=1.25 IN. RU = 35

TABLE 9 -- RESISTANCE-BLOW CURVE DATA

TIP RESISTANCE PERCENTAGE = 35.00

BLOWS/FT.	RESISTANCE TOTAL-TONS	DYNAMIC PT FORCE-TONS	MAX C STRESS LBS/SQ.IN.	SEG NO.	MAX T STRESS LBS/SQ.IN.	SEG NO.
2.58	50.	48.42	11725.	11	9883.	25
4.10	100.	92.09	12087.	12	8450.	25
6.32	150.	131.48	12090.	12	6996.	25
9.05	200.	167.03	12092.	12	5678.	25
11.84	250.	199.19	12093.	12	4469.	26
15.83	300.	228.29	12095.	12	3518.	8
17.91	350.	254.65	12096.	12	2837.	8
20.30	400.	278.52	12098.	12	1437.	27
23.09	450.	300.11	12099.	12	578.	27
26.37	500.	319.61	12101.	12	0.	39
30.27	550.	337.19	12102.	12	0.	39
35.00	600.	353.01	12104.	12	0.	39
40.81	650.	367.31	12105.	12	0.	39
48.11	700.	380.18	12107.	12	0.	39
57.53	750.	391.78	12108.	12	0.	39
69.98	800.	402.06	12110.	12	0.	39
87.06	850.	410.80	12111.	12	0.	39
111.64	900.	418.11	12112.	12	0.	39
149.29	950.	424.68	12114.	12	0.	39
212.69	1000.	430.46	12115.	12	0.	39
336.92	1050.	434.42	12117.	12	0.	39

PROB 5 36-IN. DIAMETER PILES 5-PILE STRUCTURE
200FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.10,MINIMUM WALL THICKNESS=1.25 IN. RU = 35

TABLE 10 -- SPECIFIED BLOW DATA

TIP RESISTANCE PERCENTAGE = 35.00

BLOWS PER FOOT	RESISTANCE TONS
149.29	950.
212.69	1000.
241.07	1015.
289.34	1035.

```
WAVE EQUATION ANALYSIS FOR 36-IN. DIAMETER PIPE PILES
MC CLELLAND REPORT DATA FOR ACMR 3-PILE STRUCTURE -- BORING 1
APRIL 19 1976

 PROB
   6      36-IN. DIAMETER PILES 3-PILE STRUCTURE
          200FT PENETRATION -- VULCAN 040 HAMMER
          QTIP=.30,MINIMUM WALL THICKNESS=1.25 IN.      RU = 50

TABLE 1 -- PROGRAM CONTROL DATA

     PILE TYPE                               1
     NEW HAMMER DATA OPTION                  1
     NEW MATERIAL DATA OPTION                1
     NEW PILE SECTION DATA OPTION            1
     NEW SOIL DATA OPTION                    1
     SPECIFIED BLOW COUNT OPTION             1
     OUTPUT OPTION FOR STRESS                1
     BPF FOR STRESS OUTPUT OPTION                      275.
     ULTIMATE RESISTANCE INCREMENT (TONS)              50.0
     MAX BLOWS FOR RESISTANCE-BLOW CURVE (BPF)         300.
     SPECIFIED SEGMENT LENGTH (FT)                     -0.00


TABLE 2 -- HAMMER DATA

     HAMMER DESCRIPTION              VULCAN 040 HAMMER
     HAMMER EFFICIENCY                      .75
     HAMMER ENERGY (FT-LBS)           120000.00
     HAMMER EXPLOSIVE FORCE (LBS)         -0.00
     NUMBER OF HAMMER SEGMENTS                2

     SEGMENT      SLACK      WEIGHT      AREA    COEF OF     SPRING CONSTANT
      NUMBER      (IN)        (LB)     (SQ IN) RESTITUTION     (LB / IN)

        1       1000.00  40000.00      1.00       .60        2780000.00
        2       1000.00  27800.00      1.00       .90              0.00

TABLE 3 -- MATERIAL DATA

     NUMBER OF MATERIAL TYPES =    1

        MATERIAL      (TOD)    UNIT WT.    MODULUS
          TYPE                  (PCF)       (PSI)

            1         36.000     490.0 29000000.

TABLE 4 -- PILE SECTION DATA

     TOTAL NUMBER OF PILE SECTIONS =   3
```

NUMBER OF SECTIONS ADDED 0
LENGTH OF FREE STANDING PILE(FT) 120.00

SECTION NUMBER	MATERIAL TYPE	WALL THICKNESS (IN)	LENGTH (FT)	STATION NUMBER TOP	BOTTOM
1	1	1.250	90.	0	90
2	1	1.500	100.	90	190
3	1	1.250	130.	190	320

TABLE 5 -- SOIL DATA

NUMBER OF TIP RESISTANCE PERCENTAGES		1
SIDE DAMPENING RESISTANCE	- JSIDE	.15
POINT DAMPENING RESISTANCE	- JPONT	.15
SOIL QUAKE FOR SIDE	- QSIDE	.10
SOIL QUAKE FOR POINT	- QPOINT	.30

TIP RESISTANCE PERCENTAGE
50.0000

TABLE 6 -- SPECIFIED BLOW COUNT DATA

NUMBER OF SPECIFIED BLOW COUNTS 4

BLOWS PER FOOT	TOLERANCE
150.	25.
200.	25.
250.	25.
300.	25.

PROB 6 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.30,MINIMUM WALL THICKNESS=1.25 IN. QU = 50

TABLE 7 -- PILE SEGMENT DATA

SEGMENT	ELEV FT	SLACK IN.	WEIGHT LBS	AREA SQ.IN.	COEF RSTITU	SPR STIFF LBS/IN.
1	0.00	1000.00	40000.00	1.00	.60	2780000.
2	0.00	1000.00	27800.00	1.00	.90	36642910.
3	120.00	0.00	4179.19	136.46	1.00	36642910.
4	111.00	0.00	4179.19	136.46	1.00	36642910.
5	102.00	0.00	4179.19	136.46	1.00	36642910.
6	93.00	0.00	4179.19	136.46	1.00	36642910.
7	84.00	0.00	4179.19	136.46	1.00	36642910.
8	75.00	0.00	4179.19	136.46	1.00	36642910.
9	66.00	0.00	4179.19	136.46	1.00	36642910.
10	57.00	0.00	4179.19	136.46	1.00	36642910.
11	48.00	0.00	4179.19	136.46	1.00	36642910.
12	39.00	0.00	4179.19	136.46	1.00	36642910.
13	30.00	0.00	4610.13	162.58	1.00	47147562.
14	21.67	0.00	4610.13	162.58	1.00	47147562.
15	13.33	0.00	4610.13	162.58	1.00	47147562.
16	5.00	0.00	4610.13	162.58	1.00	47147562.
17	-3.33	0.00	4610.13	162.58	1.00	47147562.
18	-11.67	0.00	4610.13	162.58	1.00	47147562.
19	-20.00	0.00	4610.13	162.58	1.00	47147562.
20	-28.33	0.00	4610.13	162.58	1.00	47147562.
21	-36.67	0.00	4610.13	162.58	1.00	47147562.
22	-45.00	0.00	4610.13	162.58	1.00	47147562.
23	-53.33	0.00	4610.13	162.58	1.00	47147562.
24	-61.67	0.00	4610.13	162.58	1.00	47147562.
25	-70.00	0.00	4024.40	136.46	1.00	38052252.
26	-78.67	0.00	4024.40	136.46	1.00	38052252.
27	-87.33	0.00	4024.40	136.46	1.00	38052252.
28	-96.00	0.00	4024.40	136.46	1.00	38052252.
29	-104.67	0.00	4024.40	136.46	1.00	38052252.
30	-113.33	0.00	4024.40	136.46	1.00	38052252.
31	-122.00	0.00	4024.40	136.46	1.00	38052252.
32	-130.67	0.00	4024.40	136.46	1.00	38052252.
33	-139.33	0.00	4024.40	136.46	1.00	38052252.
34	-148.00	0.00	4024.40	136.46	1.00	38052252.
35	-156.67	0.00	4024.40	136.46	1.00	38052252.
36	-165.33	0.00	4024.40	136.46	1.00	38052252.
37	-174.00	0.00	4024.40	136.46	1.00	38052252.
38	-182.67	0.00	4024.40	136.46	1.00	38052252.
39	-191.33	1000.00	4024.40	136.46	1.00	38052252.

PROB 6 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 040 HAMMER

QTIPE,30,MINIMUM WALL THICKNESS=1.25 IN. RU = 50

TABLE 8 -- MAXIMUM STRESS DATA

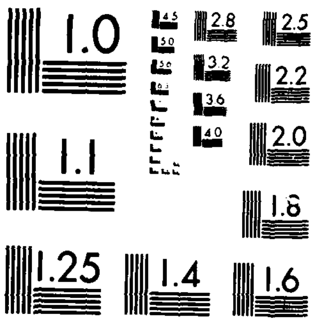
TIP RESISTANCE PERCENTAGE = 50.00

PERMANENT SET OF PILE = .0306 INCHES
NUMBER OF BLOWS PER FOOT = 392.41
TOTAL INTERVALS = 141

SEG	ELEV FT	MAX C STRESS LBS/SQ.IN.	TIME N	MAX T STRESS LBS/SQ.IN.	TIME N	AREA SQ.IN.	DMAX(M) IN.	D(M) IN.	V(M) FT/SEC
1	0.00	1781759.	31	0.	74	1.000	1.225522	1.205312	-.45
2	0.00	1482024.	41	0.	0	1.000	.812861	.796538	-.09
3	120.00	10888.	43	0.	0	136.463	.799150	.783940	-.10
4	111.00	10924.	46	0.	0	136.463	.791164	.777476	-.13
5	102.00	11003.	48	0.	0	136.463	.782992	.770172	-.17
6	93.00	11161.	51	0.	0	136.463	.775081	.762013	-.24
7	84.00	11341.	53	0.	0	136.463	.767920	.753030	-.32
8	75.00	11535.	56	0.	0	136.463	.762186	.743296	-.43
9	66.00	11715.	58	0.	0	136.463	.757298	.732855	-.54
10	57.00	11878.	60	0.	0	136.463	.752556	.721852	-.68
11	48.00	12008.	62	0.	0	136.463	.747669	.710356	-.82
12	39.00	12105.	64	0.	0	136.463	.742445	.698502	-.96
13	30.00	10214.	67	0.	0	162.578	.736588	.686389	-1.07
14	21.67	10285.	69	0.	0	162.578	.731299	.676837	-1.13
15	13.33	10364.	71	0.	0	162.578	.725213	.667244	-1.17
16	5.00	10438.	73	0.	0	162.578	.718142	.657676	-1.17
17	-3.33	10464.	75	0.	0	162.578	.710017	.648248	-1.16
18	-11.67	10433.	77	0.	0	162.578	.700690	.639032	-1.13
19	-20.00	10381.	79	0.	0	162.578	.690164	.629963	-1.11
20	-28.33	10312.	82	0.	0	162.578	.678440	.620902	-1.13
21	-36.67	10231.	84	0.	0	162.578	.665569	.611585	-1.18
22	-45.00	10132.	86	0.	0	162.578	.651543	.601724	-1.24
23	-53.33	10048.	89	0.	0	162.578	.636555	.591240	-1.29
24	-61.67	9985.	91	0.	0	162.578	.620863	.580255	-1.31
25	-70.00	11816.	94	0.	0	136.463	.604964	.568923	-1.28
26	-78.67	11716.	96	0.	0	136.463	.586655	.554716	-1.23
27	-87.33	11586.	98	0.	0	136.463	.569592	.540502	-1.17
28	-96.00	11436.	101	0.	0	136.463	.552054	.526316	-1.13
29	-104.67	11248.	103	0.	0	136.463	.533602	.511900	-1.14
30	-113.33	10970.	105	0.	0	136.463	.514645	.496806	-1.18
31	-122.00	10536.	106	0.	0	136.463	.495862	.480665	-1.21
32	-130.67	9915.	107	0.	0	136.463	.477755	.464258	-1.18
33	-139.33	9381.	113	0.	0	136.463	.459167	.446923	-1.17
34	-148.00	9251.	116	0.	0	136.463	.439553	.428638	-1.12
35	-156.67	8963.	117	0.	0	136.463	.419005	.409713	-1.00
36	-165.33	8512.	117	0.	0	136.463	.397252	.390606	-.85
37	-174.00	8249.	124	0.	0	136.463	.374728	.371281	-.71
38	-182.67	8180.	127	0.	0	136.463	.352645	.351218	-.52

AD-A164 421 STRUCTURAL CONCEPT ANALYSIS REPORT FOR THE EAST COAST AIR COMBAT MANEUVER..(U) CREST ENGINEERING INC TULSA OK MAY 76 27-771-92-APP-C CHES/NAVFAC-FPO-7601-APP-C

UNCLASSIFIED N62477-76-C-0179 F/G 13/13 NL



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

0.30

.55025 [illegible]

156.4 [illegible]

PROB 6 36-IN. DIAMETER PILES 5-PILE STRUCTURE
200FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.30,MINIMUM WALL THICKNESS=1.25 IN. RU = 50

TABLE 9 -- RESISTANCE-BLOW CURVE DATA

TIP RESISTANCE PERCENTAGE = 50.00

BLOWS/FT.	RESISTANCE TOTAL-TONS	DYNAMIC PT FORCE-TONS	MAX C STRESS LBS/SQ.IN.	SEG NO.	MAX T STRESS LBS/SQ.IN.	SEG NO.
2.45	50.	69.06	11746.	11	9772.	25
4.04	100.	131.11	12087.	12	8273.	25
6.55	150.	186.92	12089.	12	6750.	25
10.01	200.	237.13	12090.	12	5368.	25
13.45	250.	282.53	12091.	12	4078.	25
19.36	300.	323.47	12092.	12	2955.	9
22.66	350.	360.34	12094.	12	2140.	9
26.65	400.	393.66	12095.	12	963.	25
31.57	450.	423.97	12096.	12	104.	27
37.77	500.	451.48	12097.	12	0.	39
45.81	550.	475.95	12098.	12	0.	39
56.60	600.	497.58	12099.	12	0.	39
71.79	650.	519.05	12100.	12	0.	39
94.59	700.	539.35	12101.	12	0.	39
132.12	750.	552.64	12103.	12	0.	39
204.11	800.	559.94	12104.	12	0.	39
392.41	850.	556.99	12105.	12	0.	39

PROB 6 36-IN. DIAMETER PILES 5-PILE STRUCTURE
200FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.30,MINIMUM WALL THICKNESS=1.25 IN. RU = 50

TABLE 10 -- SPECIFIED BLOW DATA

TIP RESISTANCE PERCENTAGE = 50.00

BLOWS PER FOOT	RESISTANCE TONS
132.12	750.
204.11	800.
232.69	812.
293.90	831.

```
JYJOJVC.    04/20/76. *UNITED COMPUTING* 67, APEX/SL, H,0,24

09.18.44$PIL,CM100,T1000.
09.18.44$FL       64     0.000
09.18.45$AC3400CRH0023,2777100CC )H
09.18.45. 04/20/76.JYJOJVC
09.18.45.RFL,40000.
09.18.45$FL     3392     0.001
09.18.45$FL    16384     0.001
09.18.45.MAP,OFF.
09.18.45$FL      256     0.001
09.18.45.GET,PILR(CRR0024)
09.18.49.READY =    PILR
09.18.49$FL     4096     0.002        0         0.
09.18.49$FI       72        1
09.18.49.PILR.
09.18.49$FL00 16384      0.002
09.18.50$FL01 16384      0.144      190         8
09.18.50.FL REQUIRED TO LOAD      36370B ( 15608)
09.18.51.FL REQUIRED TO EXECUTE   34000B ( 14336)
09.18.51$FL    16384     0.148
09.19.57.END PILDRI
09.19.57.COST.
09.19.57$FL    14336    52.464      168        12
09.19.58.           SERVICE UNITS=    137.6
09.19.58.          JOB COST=$       34.40
09.19.58$FL    12288    52.482        7         5
09.19.58.EXIT.
09.19.58$JT00  2368    52.482
09.19.58.    *FL*  *CPU SEC. *DISC PRUS* DISC ACC
09.19.58.*P.F. PRUS*P.F. ACC *TAPE PRUS* TAPE ACC
```

Pile Driving Resistance Curves

Pile Diameter	- 30 in.
Minimum Wall Thickness	- .75 in.
	- 1.25 in.
Penetration	- 150 ft.
Hammer	- Vulcan 040
Quake Factor, tip	- .025 in.
	- .10 in.
	- .30 in.

6 0 0 0   R E M O T E   B A T C H

UNITED COMPUTING 67, APEX/SL, B,0,24

19,08,13,   04/19/76,

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JJJJJJJJJJJ  VV        VV  JJJJJJJJJJJJ  ZZZZZZZZZZZZ   GGGGGGGGGG   BBBBBBBBBBB   RRRRRRRRRRR
JJJJJJJJJJJJ VV        VV  JJJJJJJJJJJJ  ZZZZZZZZZZZZ  GGGGGGGGGGGG  BBBBBBBBBBBB  RRRRRRRRRRRR
     JJ      VV        VV       JJ       Z         ZZ  GG         G  BB        BB  RR        RR
     JJ      VV        VV       JJ                ZZ   GG            BB        BB  RR        RR
     JJ      VV        VV       JJ               ZZ    GG            BB        BB  RR        RR
     JJ      VV        VV       JJ              ZZ     GG            BB        BB  RR        RR
     JJ      VVV      VVV       JJ             ZZ      GG            BB        BB  RR        RR
     JJ       VVV    VVV        JJ         ZZZZZZZZ    GG            BBBBBBBBBBBB  RRRRRRRRRRRR
     JJ        VVV  VVV         JJ            ZZ       GG      GGGG  BBBBBBBBBBB   RRRRRRRRRRR
     JJ          VVVV           JJ           ZZ        GG      GGGG  BB        BB  RR  RR
     JJ           VV            JJ          ZZ         GG        GG  BB        BB  RR   RR
     JJ           VV            JJ         ZZ          GG        GG  BB        BB  RR    RR
     JJ           VV            JJ        ZZ           GG        GG  BB        BB  RR     RR
JJ   JJ           VV       JJ   JJ       ZZ         Z  GG        GG  BB        BB  RR      RR
JJJJJJJ           VV       JJJJJJJ       ZZZZZZZZZZZZ  GGGGGGGGGGGG  BBBBBBBBBBBB  RR       RR
 JJJJJ            VV        JJJJJ        ZZZZZZZZZZZZ   GGGGGGGGGG   BBBBBBBBBBB   RR        RR
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WAVE EQUATION ANALYSIS FOR 36-IN. DIAMETER PIPE PILES
MC CLELLAND REPORT DATA FOR ACMR 3-PILE STRUCTURE -- BORING 1
APRIL 19 1976

 PROB
   1       36-IN. DIAMETER PILES 3-PILE STRUCTURE
           150FT PENETRATION -- VULCAN 040 HAMMER
           QTIP=.025,MINIMUM WALL THICKNESS=.75 IN.      RU = 14
```

TABLE 1 -- PROGRAM CONTROL DATA

PILE TYPE	1
NEW HAMMER DATA OPTION	1
NEW MATERIAL DATA OPTION	1
NEW PILE SECTION DATA OPTION	1
NEW SOIL DATA OPTION	1
SPECIFIED BLOW COUNT OPTION	1
OUTPUT OPTION FOR STRESS	1
BPF FOR STRESS OUTPUT OPTION	275.
ULTIMATE RESISTANCE INCREMENT (TONS)	50.0
MAX BLOWS FOR RESISTANCE-BLOW CURVE (BPF)	300.
SPECIFIED SEGMENT LENGTH (FT)	-0.00

TABLE 2 -- HAMMER DATA

HAMMER DESCRIPTION	VULCAN 040 HAMMER
HAMMER EFFICIENCY	.75
HAMMER ENERGY (FT-LBS)	120000.00
HAMMER EXPLOSIVE FORCE (LBS)	-0.00
NUMBER OF HAMMER SEGMENTS	2

SEGMENT NUMBER	SLACK (IN)	WEIGHT (LB)	AREA (SQ IN)	COEF OF RESTITUTION	SPRING CONSTANT (LB / IN)
1	1000.00	40000.00	1.00	.60	2780000.00
2	1000.00	27800.00	1.00	.90	0.00

TABLE 3 -- MATERIAL DATA

NUMBER OF MATERIAL TYPES = 1

MATERIAL TYPE	(TOD)	UNIT WT. (PCF)	MODULUS (PSI)
1	36.000	490.0	29000000.

TABLE 4 -- PILE SECTION DATA

TOTAL NUMBER OF PILE SECTIONS	4
NUMBER OF SECTIONS CHANGED	0

LENGTH OF FREE STANDING PILE(FT) 120.00

SECTION NUMBER	MATERIAL TYPE	WALL THICKNESS (IN)	LENGTH (FT)	STATION NUMBER TOP	STATION NUMBER BOTTOM
1	1	1.250	90.	0	90
2	1	1.500	100.	90	190
3	1	1.250	50.	190	240
4	1	.750	30.	240	270

TABLE 5 -- SOIL DATA

NUMBER OF TIP RESISTANCE PERCENTAGES 1
SIDE DAMPENING RESISTANCE = JSIDE .15
POINT DAMPENING RESISTANCE = JPONT .15
SOIL QUAKE FOR SIDE = QSIDE .10
SOIL QUAKE FOR POINT = QPOINT .03

TIP RESISTANCE PERCENTAGE
14.0000

TABLE 6 -- SPECIFIED BLOW COUNT DATA

NUMBER OF SPECIFIED BLOW COUNTS 4

BLOWS PER FOOT	TOLERANCE
150.	25.
200.	25.
250.	25.
300.	25.

PROB 1 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.025,MINIMUM WALL THICKNESS=.75 IN. RU = 14

TABLE 7 -- PILE SEGMENT DATA

SEGMENT	ELEV FT	SLACK IN.	WEIGHT LBS	AREA SQ.IN.	COEF RSTITU	SPR STIFF LBS/IN.
1	0.00	1000.00	40000.00	1.00	.60	2780000.
2	0.00	1000.00	27800.00	1.00	.90	36642910.
3	120.00	0.00	4179.19	136.46	1.00	36642910.
4	111.00	0.00	4179.19	136.46	1.00	36642910.
5	102.00	0.00	4179.19	136.46	1.00	36642910.
6	93.00	0.00	4179.19	136.46	1.00	36642910.
7	84.00	0.00	4179.19	136.46	1.00	36642910.
8	75.00	0.00	4179.19	136.46	1.00	36642910.
9	66.00	0.00	4179.19	136.46	1.00	36642910.
10	57.00	0.00	4179.19	136.46	1.00	36642910.
11	48.00	0.00	4179.19	136.46	1.00	36642910.
12	39.00	0.00	4179.19	136.46	1.00	36642910.
13	30.00	0.00	4610.13	162.58	1.00	47147562.
14	21.67	0.00	4610.13	162.58	1.00	47147562.
15	13.33	0.00	4610.13	162.58	1.00	47147562.
16	5.00	0.00	4610.13	162.58	1.00	47147562.
17	-3.33	0.00	4610.13	162.58	1.00	47147562.
18	-11.67	0.00	4610.13	162.58	1.00	47147562.
19	-20.00	0.00	4610.13	162.58	1.00	47147562.
20	-28.33	0.00	4610.13	162.58	1.00	47147562.
21	-36.67	0.00	4610.13	162.58	1.00	47147562.
22	-45.00	0.00	4610.13	162.58	1.00	47147562.
23	-53.33	0.00	4610.13	162.58	1.00	47147562.
24	-61.67	0.00	4610.13	162.58	1.00	47147562.
25	-70.00	0.00	3869.62	136.46	1.00	39574342.
26	-78.33	0.00	3869.62	136.46	1.00	39574342.
27	-86.67	0.00	3869.62	136.46	1.00	39574342.
28	-95.00	0.00	3869.62	136.46	1.00	39574342.
29	-103.33	0.00	3869.62	136.46	1.00	39574342.
30	-111.67	0.00	3869.62	136.46	1.00	39574342.
31	-120.00	0.00	2826.21	83.06	1.00	20071879.
32	-130.00	0.00	2826.21	83.06	1.00	20071879.
33	-140.00	1000.00	2826.21	83.06	1.00	20071879.

PROB 1 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.025,MINIMUM WALL THICKNESS=.75 IN. RU = 14

TABLE 8 -- MAXIMUM STRESS DATA

TIP RESISTANCE PERCENTAGE = 14.00

PERMANENT SET OF PILE = .0367 INCHES
NUMBER OF BLOWS PER FOOT = 327.21
TOTAL INTERVALS = 131

SEG	ELEV FT	MAX C STRESS LBS/SQ.IN.	TIME N	MAX T STRESS LBS/SQ.IN.	TIME N	AREA SQ.IN.	DMAX(M) IN.	D(M) IN.	V(M) FT/SEC
1	0.00	1781868.	34	0.	81	1.000	1.171165	1.170179	-.22
2	0.00	1481874.	45	0.	0	1.000	.760521	.702812	-.97
3	120.00	10887.	47	0.	0	136.463	.746588	.683076	-1.14
4	111.00	10926.	50	0.	0	136.463	.738074	.669082	-1.33
5	102.00	11004.	53	0.	0	136.463	.728692	.654424	-1.51
6	93.00	11160.	56	0.	0	136.463	.718454	.639069	-1.67
7	84.00	11341.	58	0.	0	136.463	.707286	.623030	-1.81
8	75.00	11535.	61	0.	0	136.463	.695039	[illegible]	-1.94
9	66.00	11714.	63	0.	0	136.463	.681653	.589162	-2.07
10	57.00	11884.	66	0.	0	[illegible]	.666971	.571261	-2.20
11	48.00	12035.	68	0.	0	136.463	.650786	.552548	-2.32
12	39.00	12186.	71	0.	0	136.463	.632767	[illegible]	-2.45
13	30.00	10381.	74	0.	0	162.578	.612687	.512267	-2.58
14	21.67	10604.	77	0.	0	162.578	.595085	.495080	-2.67
15	13.33	10893.	79	0.	0	162.578	.575340	.476832	-2.74
16	5.00	11215.	82	0.	0	162.578	.553536	.457504	-2.78
17	-3.33	11481.	84	0.	0	162.578	.529821	.437089	-2.77
18	-11.67	11656.	87	0.	0	162.578	.504488	.415795	-2.70
19	-20.00	11756.	90	0.	0	162.578	.477702	.393761	-2.57
20	-28.33	11758.	92	0.	0	162.578	.449681	.371106	-2.40
21	-36.67	11608.	94	0.	0	162.578	[illegible]	.347969	-2.25
22	-45.00	11306.	97	0.	[illegible]	162.578	.389620	.324248	-2.10
23	-53.33	10910.	100	0.		162.578	.357667	.300292	-1.93
24	-61.67	10593.	104	0.	0	162.578	.324909	.276236	-1.78
25	-70.00	12185.	106	0.	0	136.463	.291907	.252292	-1.61
26	-78.33	11642.	109	0	0	136.463	.254783	.224633	-1.44
27	-86.67	10633.	110		0	[illegible]	.220241	.198400	-1.25
28	-95.00	9418.	112		[illegible]	[illegible]	.188678	.173932	-1.15
29	-103.33	8093.	114	0.	[illegible]	136.463	.160426	.151185	-1.01
30	-111.67	6734.	117	0.	0	136.463	.136447	.130587	-.84
31	-120.00	8345.	116	0.	0	[illegible]	.116005	.112567	-.67
32	-130.00	6226.	120	0.	0	[illegible]	.084694	.083698	-.39
33	-140.00	4791.	117	0.	0	[illegible]	.061674	.061513	-.17

PROB 1 36-IN. DIAMETER PILES 3-PILE STRU...
150FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.025,MINIMUM WALL THICKNESS .75 IN. RU = 14

TABLE 9 -- RESISTANCE-BLOW CURVE DATA

TIP RESISTANCE PERCENTAGE = 14.00

BLOWS/FT.	RESISTANCE TOTAL-TONS	DYNAMIC PT FORCE-TONS	MAX C STRESS LBS/SQ.IN.	SEG NO.	MAX T STRESS LBS/SQ.IN.	SEG NO.
2.92	50.	19.65	11688.	12	8525.	12
4.34	100.	37.37	12072.	12	7105.	11
6.42	150.	53.44	12098.	12	5839.	10
9.14	200.	68.06	12102.	12	4702.	9
11.68	250.	81.36	12105	12	3699.	8
15.38	300.	93.45	12109.	12	2811.	8
17.07	350.	104.43	12113.	12	2023.	7
18.98	400.	114.41	12116.	12	755.	21
21.15	450.	123.51	12120.	12	45.	21
23.65	500.	131.71	12123.	12	0.	33
26.54	550.	139.10	12127.	12	0.	33
29.92	600.	145.74	12131.	12	0.	33
33.92	650.	151.52	12135.	12	0.	33
38.69	700.	156.58	12140.	12	0.	33
44.46	750.	161.01	12144.	12	0.	33
51.56	800.	164.90	12148.	12	0.	33
60.44	850.	168.21	12153.	12	0.	33
71.73	900.	170.68	12157.	12	0.	33
86.38	950.	172.13	12161.	12	0.	33
105.94	1000.	174.56	12165.	12	0.	33
132.05	1050.	179.44	12169.	12	0.	33
164.60	1100.	184.89	12174.	12	0.	33
204.92	1150.	190.52	12178.	12	0.	33
256.51	1200.	195.05	12182.	12	0.	33
327.21	1250.	198.96	12186.	12	0.	33

PROB 1 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.025,MINIMUM WALL THICKNESS=.75 IN. RU = 14

TABLE 10 -- SPECIFIED BLOW DATA

TIP RESISTANCE PERCENTAGE = 14.00

BLOWS PER FOOT	RESISTANCE TONS
132.05	1050.
204.92	1150.
256.51	1200.
296.68	1231.

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WAVE EQUATION ANALYSIS FOR 36-IN. DIAMETER PIPE PILES
MC CLELLAND REPORT DATA FOR ACMR 3-PILE STRUCTURE -- BORING 1
APRIL 19 1976

 PROB
   2      36-IN. DIAMETER PILES 3-PILE STRUCTURE
          150FT PENETRATION -- VULCAN 040 HAMMER
          QTIP=.10,MINIMUM WALL THICKNESS=.75 IN.      RU = 35

TABLE 1 -- PROGRAM CONTROL DATA

     PILE TYPE                          1
     NEW HAMMER DATA OPTION             1
     NEW MATERIAL DATA OPTION           1
     NEW PILE SECTION DATA OPTION       1
     NEW SOIL DATA OPTION               1
     SPECIFIED BLOW COUNT OPTION        1
     OUTPUT OPTION FOR STRESS           1
     BPF FOR STRESS OUTPUT OPTION                       275.
     ULTIMATE RESISTANCE INCREMENT (TONS)               50.0
     MAX BLOWS FOR RESISTANCE-BLOW CURVE (BPF)          300.
     SPECIFIED SEGMENT LENGTH (FT)                      -0.00


TABLE 2 -- HAMMER DATA

     HAMMER DESCRIPTION             VULCAN 040 HAMMER
     HAMMER EFFICIENCY                     .75
     HAMMER ENERGY (FT-LBS)          120000.00
     HAMMER EXPLOSIVE FORCE (LBS)        -0.00
     NUMBER OF HAMMER SEGMENTS               2

     SEGMENT    SLACK      WEIGHT      AREA    COEF OF    SPRING CONSTANT
      NUMBER    (IN)       (LB)      (SQ IN) RESTITUTION    (LB / IN)

        1       1000.00  40000.00     1.00       .60       2780000.00
        2       1000.00  27800.00     1.00       .90             0.00

TABLE 3 -- MATERIAL DATA

     NUMBER OF MATERIAL TYPES =     1

        MATERIAL      (TOD)   UNIT WT.    MODULUS
          TYPE                 (PCF)       (PSI)

           1         36.000     490.0 29000000.

TABLE 4 -- PILE SECTION DATA

     TOTAL NUMBER OF PILE SECTIONS        4
     NUMBER OF SECTIONS CHANGED           0
```

NUMBER OF SECTIONS CHANGED 0
NUMBER OF SECTIONS ADDED 0
LENGTH OF FREE STANDING PILE(FT) 120.00

SECTION NUMBER	MATERIAL TYPE	WALL THICKNESS (IN)	LENGTH (FT)	STATION NUMBER TOP	STATION NUMBER BOTTOM
1	1	1.250	90.	0	90
2	1	1.500	100.	90	190
3	1	1.250	50.	190	240
4	1	.750	30.	240	270

TABLE 5 -- SOIL DATA

NUMBER OF TIP RESISTANCE PERCENTAGES 1
SIDE DAMPENING RESISTANCE = JSIDE .15
POINT DAMPENING RESISTANCE = JPONT .15
SOIL QUAKE FOR SIDE = QSIDE .10
SOIL QUAKE FOR POINT = QPOINT .10

TIP RESISTANCE PERCENTAGE
35.0000

TABLE 6 -- SPECIFIED BLOW COUNT DATA

NUMBER OF SPECIFIED BLOW COUNTS 4

BLOWS PER FOOT	TOLERANCE
150.	25.
200.	25.
250.	25.
300.	25.

PROB 2 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.10,MINIMUM WALL THICKNESS=.75 IN. RU = 35

TABLE 7 -- PILE SEGMENT DATA

SEGMENT	ELEV FT	SLACK IN.	WEIGHT LBS	AREA SQ.IN.	COEF RSTITU	SPR STIFF LBS/IN.
1	0.00	1000.00	40000.00	1.00	.60	2780000.
2	0.00	1000.00	27800.00	1.00	.90	36642910.
3	120.00	0.00	4179.19	136.46	1.00	36642910.
4	111.00	0.00	4179.19	136.46	1.00	36642910.
5	102.00	0.00	4179.19	136.46	1.00	36642910.
6	93.00	0.00	4179.19	136.46	1.00	36642910.
7	84.00	0.00	4179.19	136.46	1.00	36642910.
8	75.00	0.00	4179.19	136.46	1.00	36642910.
9	66.00	0.00	4179.19	136.46	1.00	36642910.
10	57.00	0.00	4179.19	136.46	1.00	36642910.
11	48.00	0.00	4179.19	136.46	1.00	36642910.
12	39.00	0.00	4179.19	136.46	1.00	36642910.
13	30.00	0.00	4610.13	162.58	1.00	47147562.
14	21.67	0.00	4610.13	162.58	1.00	47147562.
15	13.33	0.00	4610.13	162.58	1.00	47147562.
16	5.00	0.00	4610.13	162.58	1.00	47147562.
17	-3.33	0.00	4610.13	162.58	1.00	47147562.
18	-11.67	0.00	4610.13	162.58	1.00	47147562.
19	-20.00	0.00	4610.13	162.58	1.00	47147562.
20	-28.33	0.00	4610.13	162.58	1.00	47147562.
21	-36.67	0.00	4610.13	162.58	1.00	47147562.
22	-45.00	0.00	4610.13	162.58	1.00	47147562.
23	-53.33	0.00	4610.13	162.58	1.00	47147562.
24	-61.67	0.00	4610.13	162.58	1.00	47147562.
25	-70.00	0.00	3869.62	136.46	1.00	39574342.
26	-78.33	0.00	3869.62	136.46	1.00	39574342.
27	-86.67	0.00	3869.62	136.46	1.00	39574342.
28	-95.00	0.00	3869.62	136.46	1.00	39574342.
29	-103.33	0.00	3869.62	136.46	1.00	39574342.
30	-111.67	0.00	3869.62	136.46	1.00	39574342.
31	-120.00	0.00	2826.21	83.06	1.00	20071879.
32	-130.00	0.00	2826.21	83.06	1.00	20071879.
33	-140.00	1000.00	2826.21	83.06	1.00	20071879.

PROB 2 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.10,MINIMUM WALL THICKNESS=.75 IN. RU = 35

TABLE 8 -- MAXIMUM STRESS DATA

TIP RESISTANCE PERCENTAGE = 35.00

PERMANENT SET OF PILE = .0250 INCHES
NUMBER OF BLOWS PER FOOT = 480.92
TOTAL INTERVALS = 135

SEG	ELEV FT	MAX C STRESS LBS/SQ.IN.	TIME N	MAX T STRESS LBS/SQ.IN.	TIME N	AREA SQ.IN.	DMAX(M) IN.	D(M) IN.	V(M) FT/SEC
1	0.00	1781868.	34	0.	81	1.000	1.182726	1.179973	-.33
2	0.00	1481874.	45	0.	0	1.000	.771284	.722784	-.56
3	120.00	10887.	47	0.	0	136.463	.757458	.705332	-.67
4	111.00	10926.	50	0.	0	136.463	.749159	.694071	-.80
5	102.00	11004.	53	0.	0	136.463	.740268	.682530	-.93
6	93.00	11160.	56	0.	0	136.463	.730862	.670786	-1.04
7	84.00	11341.	58	0.	0	136.463	.720992	.658860	-1.15
8	75.00	11535.	61	0.	0	136.463	.710650	.646654	-1.25
9	66.00	11713.	63	0.	0	136.463	.699831	.634128	-1.35
10	57.00	11881.	66	0.	0	136.463	.688300	.621157	-1.46
11	48.00	12022.	68	0.	0	136.463	.675691	.607618	-1.59
12	39.00	12147.	71	0.	0	136.463	.661726	.593234	-1.73
13	30.00	10303.	73	0.	0	162.578	.646256	.577842	-1.88
14	21.67	10455.	76	0.	0	162.578	.632816	.564897	-2.00
15	13.33	10641.	78	0.	0	162.578	.618012	.550794	-2.10
16	5.00	10851.	81	0.	0	162.578	.601953	.535559	-2.18
17	-3.33	11007.	83	0.	0	162.578	.584622	.519332	-2.20
18	-11.67	11092.	86	0.	0	162.578	.566150	.502285	-2.16
19	-20.00	11135.	89	0.	0	162.578	.546474	.484615	-2.11
20	-28.33	11132.	91	0.	0	162.578	.525528	.466299	-2.06
21	-36.67	11030.	93	0.	0	162.578	.503193	.447276	-1.99
22	-45.00	10810.	96	0.	0	162.578	.479284	.427583	-1.91
23	-53.33	10487.	98	0.	0	162.578	.453875	.407340	-1.83
24	-61.67	10190.	102	0.	0	162.578	.427290	.386498	-1.81
25	-70.00	11795.	106	0.	0	136.463	.400516	.364961	-1.77
26	-78.33	11551.	108	0.	0	136.463	.369013	.338785	-1.74
27	-86.67	11123.	109	0.	0	136.463	.338423	.312195	-1.71
28	-95.00	10400.	112	0.	0	136.463	.308388	.285612	-1.58
29	-103.33	9658.	114	0.	0	136.463	.278628	.259776	-1.41
30	-111.67	8934.	118	0.	0	136.463	.248857	.234794	-1.24
31	-120.00	13671.	123	0.	0	83.056	.219549	.210714	-1.01
32	-130.00	12207.	123	0.	0	83.056	.168282	.166026	-.59
33	-140.00	10163.	120	0.	0	83.056	.124952	.124945	-.16

PROB 2 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.10,MINIMUM WALL THICKNESS=.75 IN. RU = 35

TABLE 9 -- RESISTANCE-BLOW CURVE DATA

TIP RESISTANCE PERCENTAGE = 35.00

BLOWS/FT.	RESISTANCE TOTAL-TONS	DYNAMIC PT FORCE-TONS	MAX C STRESS LBS/SQ.IN.	SEG NO.	MAX T STRESS LBS/SQ.IN.	SEG NO.
2.91	50.	48.98	11702.	12	8443.	12
4.43	100.	92.92	12090.	12	6944.	11
6.72	150.	132.58	12094.	12	5599.	10
9.71	200.	168.42	12097.	12	4369.	10
12.77	250.	200.80	12100.	12	3276.	9
16.85	300.	230.10	12103.	12	2303.	9
19.01	350.	256.67	12106.	12	1448.	8
21.51	400.	280.83	12108.	12	333.	19
24.44	450.	302.84	12111.	12	0.	33
27.93	500.	322.88	12114.	12	0.	33
32.13	550.	340.96	12532.	31	0.	33
37.26	600.	357.18	12978.	31	0.	33
43.65	650.	371.39	13348.	31	0.	33
51.76	700.	383.52	13640.	31	0.	33
62.32	750.	393.41	13849.	31	0.	33
76.52	800.	401.49	13971.	31	0.	33
96.50	850.	408.02	14041.	31	0.	33
126.36	900.	413.66	14076.	31	0.	33
174.81	950.	418.15	14064.	31	0.	33
264.71	1000.	420.31	13951.	31	0.	33
480.92	1050.	422.06	13671.	31	0.	33

PROB 2 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.10,MINIMUM WALL THICKNESS=.75 IN. RU = 35

TABLE 10 -- SPECIFIED BLOW DATA

TIP RESISTANCE PERCENTAGE = 35.00

BLOWS PER FOOT	RESISTANCE TONS
126.36	900.
194.33	964.
264.71	1000.
287.35	1008.

WAVE EQUATION ANALYSIS FOR 36-IN. DIAMETER PIPE PILES
MC CLELLAND REPORT DATA FOR ACMR 3-PILE STRUCTURE -- BORING 1
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PROB
  3      36-IN. DIAMETER PILES 3-PILE STRUCTURE
         150FT PENETRATION -- VULCAN 040 HAMMER
         QTIP=.30, MINIMUM WALL THICKNESS=.75 IN.     RU = 50
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TABLE 1 -- PROGRAM CONTROL DATA

PILE TYPE	1	
NEW HAMMER DATA OPTION	1	
NEW MATERIAL DATA OPTION	1	
NEW PILE SECTION DATA OPTION	1	
NEW SOIL DATA OPTION	1	
SPECIFIED BLOW COUNT OPTION	1	
OUTPUT OPTION FOR STRESS	1	
BPF FOR STRESS OUTPUT OPTION		275.
ULTIMATE RESISTANCE INCREMENT (TONS)		50.0
MAX BLOWS FOR RESISTANCE-BLOW CURVE (BPF)		300.
SPECIFIED SEGMENT LENGTH (FT)		-0.00

TABLE 2 -- HAMMER DATA

HAMMER DESCRIPTION	VULCAN 040 HAMMER
HAMMER EFFICIENCY	.75
HAMMER ENERGY (FT-LBS)	120000.00
HAMMER EXPLOSIVE FORCE (LBS)	-0.00
NUMBER OF HAMMER SEGMENTS	2

SEGMENT NUMBER	SLACK (IN)	WEIGHT (LB)	AREA (SQ IN)	COEF OF RESTITUTION	SPRING CONSTANT (LB / IN)
1	1000.00	40000.00	1.00	.60	2780000.00
2	1000.00	27800.00	1.00	.90	0.00

TABLE 3 -- MATERIAL DATA

NUMBER OF MATERIAL TYPES = 1

MATERIAL TYPE	(TOD)	UNIT WT. (PCF)	MODULUS (PSI)
1	36.000	490.0	29000000.

TABLE 4 -- PILE SECTION DATA

TOTAL NUMBER OF PILE SECTIONS	4
NUMBER OF SECTIONS CHANGED	4

NUMBER OF SECTIONS CHANGED 0
NUMBER OF SECTIONS ADDED 0
LENGTH OF FREE STANDING PILE(FT) 120.00

SECTION NUMBER	MATERIAL TYPE	WALL THICKNESS (IN)	LENGTH (FT)	STATION NUMBER TOP	STATION NUMBER BOTTOM
1	1	1.250	90.	0	90
2	1	1.500	100.	90	190
3	1	1.250	50.	190	240
4	1	.750	30.	240	270

TABLE 5 -- SOIL DATA

NUMBER OF TIP RESISTANCE PERCENTAGES 1
SIDE DAMPENING RESISTANCE = JSIDE .15
POINT DAMPENING RESISTANCE = JPOINT .15
SOIL QUAKE FOR SIDE = QSIDE .10
SOIL QUAKE FOR POINT = QPOINT .30

TIP RESISTANCE PERCENTAGE
50.0000

TABLE 6 -- SPECIFIED BLOW COUNT DATA

NUMBER OF SPECIFIED BLOW COUNTS 4

BLOWS PER FOOT	TOLERANCE
150.	25.
200.	25.
250.	25.
300.	25.

NUMBER OF SECTIONS CHANGED 4
NUMBER OF SECTIONS ADDED 0
LENGTH OF FREE STANDING PILE(FT) 120.00

SECTION NUMBER	MATERIAL TYPE	WALL THICKNESS (IN)	LENGTH (FT)	STATION NUMBER TOP	STATION NUMBER BOTTOM
1	1	1.250	90.	0	90
2	1	1.500	100.	90	190
3	1	1.250	50.	190	240
4	1	.750	30.	240	270

TABLE 5 -- SOIL DATA

NUMBER OF TIP RESISTANCE PERCENTAGES		1
SIDE DAMPENING RESISTANCE	= JSIDE	.15
POINT DAMPENING RESISTANCE	= JPONT	.15
SOIL QUAKE FOR SIDE	= QSIDE	.10
SOIL QUAKE FOR POINT	= QPOINT	.30

TIP RESISTANCE PERCENTAGE
50.0000

TABLE 6 -- SPECIFIED BLOW COUNT DATA

NUMBER OF SPECIFIED BLOW COUNTS 4

BLOWS PER FOOT	TOLERANCE
150.	25.
200.	25.
250.	25.
300.	25.

PROB 3 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.30, MINIMUM WALL THICKNESS=.75 IN. RU = 50

TABLE 7 -- PILE SEGMENT DATA

SEGMENT	ELEV FT	SLACK IN.	WEIGHT LBS	AREA SQ.IN.	COEF RSTITU	SPR STIFF LBS/IN.
1	0.00	1000.00	40000.00	1.00	.60	2780000.
2	0.00	1000.00	27800.00	1.00	.90	36642910.
3	120.00	0.00	4179.19	136.46	1.00	36642910.
4	111.00	0.00	4179.19	136.46	1.00	36642910.
5	102.00	0.00	4179.19	136.46	1.00	36642910.
6	93.00	0.00	4179.19	136.46	1.00	36642910.
7	84.00	0.00	4179.19	136.46	1.00	36642910.
8	75.00	0.00	4179.19	136.46	1.00	36642910.
9	66.00	0.00	4179.19	136.46	1.00	36642910.
10	57.00	0.00	4179.19	136.46	1.00	36642910.
11	48.00	0.00	4179.19	136.46	1.00	36642910.
12	39.00	0.00	4179.19	136.46	1.00	36642910.
13	30.00	0.00	4610.13	162.58	1.00	47147562.
14	21.67	0.00	4610.13	162.58	1.00	47147562.
15	13.33	0.00	4610.13	162.58	1.00	47147562.
16	5.00	0.00	4610.13	162.58	1.00	47147562.
17	-3.33	0.00	4610.13	162.58	1.00	47147562.
18	-11.67	0.00	4610.13	162.58	1.00	47147562.
19	-20.00	0.00	4610.13	162.58	1.00	47147562.
20	-28.33	0.00	4610.13	162.58	1.00	47147562.
21	-36.67	0.00	4610.13	162.58	1.00	47147562.
22	-45.00	0.00	4610.13	162.58	1.00	47147562.
23	-53.33	0.00	4610.13	162.58	1.00	47147562.
24	-61.67	0.00	4610.13	162.58	1.00	47147562.
25	-70.00	0.00	3869.62	136.46	1.00	39574342.
26	-78.33	0.00	3869.62	136.46	1.00	39574342.
27	-86.67	0.00	3869.62	136.46	1.00	39574342.
28	-95.00	0.00	3869.62	136.46	1.00	39574342.
29	-103.33	0.00	3869.62	136.46	1.00	39574342.
30	-111.67	0.00	3869.62	136.46	1.00	39574342.
31	-120.00	0.00	2826.21	83.06	1.00	20071879.
32	-130.00	0.00	2826.21	83.06	1.00	20071879.
33	-140.00	1000.00	2826.21	83.06	1.00	20071879.

PROB 3 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.30, MINIMUM WALL THICKNESS=.75 IN. RU = 50

TABLE A -- MAXIMUM STRESS DATA

TIP RESISTANCE PERCENTAGE = 50.00

PERMANENT SET OF PILE = .0321 INCHES
NUMBER OF BLOWS PER FOOT = 373.31
TOTAL INTERVALS = 140

SEG	ELEV FT	MAX C STRESS LBS/SQ.IN.	TIME N	MAX T STRESS LBS/SQ.IN.	TIME N	AREA SQ.IN.	DMAX(M) IN.	D(M) IN.	V(M) FT/SEC
1	0.00	1781868.	34	0.	81	1.000	1.204296	1.198202	-.43
2	0.00	1481874.	45	0.	0	1.000	.792178	.757744	-.11
3	120.00	10887.	47	0.	0	136.463	.778429	.742907	-.15
4	111.00	10926.	50	0.	0	136.463	.770316	.734703	-.19
5	102.00	11004.	53	0.	0	136.463	.761851	.726570	-.24
6	93.00	11160.	56	0.	0	136.463	.753274	.718625	-.30
7	84.00	11341.	58	0.	0	136.463	.744813	.710900	-.35
8	75.00	11535.	61	0.	0	136.463	.736684	.703425	-.42
9	66.00	11713.	63	0.	0	136.463	.728838	.696071	-.48
10	57.00	11878.	66	0.	0	136.463	.720722	.688699	-.54
11	48.00	12014.	68	0.	0	136.463	.712020	.681221	-.60
12	39.00	12119.	70	0.	0	136.463	.702630	.673575	-.66
13	30.00	10248.	73	0.	0	162.578	.692528	.665626	-.74
14	21.67	10344.	75	0.	0	162.578	.684165	.658999	-.81
15	13.33	10467.	78	0.	0	162.578	.675458	.651804	-.89
16	5.00	10589.	80	0.	0	162.578	.666471	.643886	-.97
17	-3.33	10661.	82	0.	0	162.578	.656982	.635128	-1.03
18	-11.67	10674.	85	0.	0	162.578	.646975	.625606	-1.06
19	-20.00	10660.	87	0.	0	162.578	.636341	.615553	-1.04
20	-28.33	10624.	90	0.	0	162.578	.624882	.605035	-1.04
21	-36.67	10531.	92	0.	0	162.578	.612465	.593864	-1.07
22	-45.00	10347.	95	0.	0	162.578	.598959	.581892	-1.13
23	-53.33	10064.	96	0.	0	162.578	.584568	.568925	-1.20
24	-61.67	9722.	99	0.	0	162.578	.569833	.554682	-1.29
25	-70.00	11123.	101	0.	0	136.463	.554514	.539199	-1.33
26	-78.33	10573.	104	0.	0	136.463	.535578	.519895	-1.37
27	-86.67	10033.	107	0.	0	136.463	.515504	.499735	-1.40
28	-95.00	9661.	111	0.	0	136.463	.494100	.478717	-1.37
29	-103.33	9163.	112	0.	0	136.463	.471344	.457166	-1.26
30	-111.67	8619.	116	0.	0	136.463	.447315	.435561	-1.11
31	-120.00	13695.	122	0.	0	83.056	.422142	.414109	-.94
32	-130.00	13202.	125	0.	0	83.056	.374954	.372811	-.60
33	-140.00	12524.	126	0.	0	83.056	.332145	.332117	-.18

PROB 3 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.30, MINIMUM WALL THICKNESS=.75 IN., RU = 50

TABLE 9 -- RESISTANCE-BLOW CURVE DATA

TIP RESISTANCE PERCENTAGE = 50.00

BLOWS/FT.	RESISTANCE TOTAL-TONS	DYNAMIC PT FORCE-TONS	MAX C STRESS LBS/SQ.IN.	SEG NO.	MAX T STRESS LBS/SQ.IN.	SEG NO.
2.83	50.	69.84	11695.	12	8388.	12
4.56	100.	132.29	12089.	12	6854.	11
7.29	150.	188.76	12092.	12	5380.	10
10.87	200.	239.33	12094.	12	4074.	10
15.07	250.	284.07	12096.	12	2874.	10
21.32	300.	323.63	12098.	12	1837.	6
25.03	350.	358.55	12100.	12	1310.	6
29.59	400.	389.65	12102.	12	908.	5
35.33	450.	417.45	12501.	31	214.	12
42.77	500.	441.95	12947.	31	0.	33
52.73	550.	462.92	13285.	31	0.	33
66.79	600.	480.45	13514.	31	0.	33
87.93	650.	499.22	13641.	31	0.	33
122.85	700.	513.92	13696.	31	0.	33
190.74	750.	524.18	13711.	31	0.	33
373.31	800.	520.10	13695.	31	0.	33

PROB 3 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.30, MINIMUM WALL THICKNESS=.75 IN. RU = 50

TABLE 10 -- SPECIFIED BLOW DATA

TIP RESISTANCE PERCENTAGE = 50.00

BLOWS PER FOOT	RESISTANCE TONS
144.02	720.
190.74	750.
228.72	766.
294.68	785.

WAVE EQUATION ANALYSIS FOR 36-IN. DIAMETER PIPE PILES
MC CLELLAND REPORT DATA FOR ACMR 3-PILE STRUCTURE -- BORING 1
APRIL 19 1976

PROB
4 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER
QTIP=.025,MINIMUM WALL THICKNESS=1.25 IN. RU = 14

TABLE 1 -- PROGRAM CONTROL DATA

PILE TYPE	1	
NEW HAMMER DATA OPTION	1	
NEW MATERIAL DATA OPTION	1	
NEW PILE SECTION DATA OPTION	1	
NEW SOIL DATA OPTION	1	
SPECIFIED BLOW COUNT OPTION	1	
OUTPUT OPTION FOR STRESS	1	
BPF FOR STRESS OUTPUT OPTION		275.
ULTIMATE RESISTANCE INCREMENT (TONS)		50.0
MAX BLOWS FOR RESISTANCE-BLOW CURVE (BPF)		300.
SPECIFIED SEGMENT LENGTH (FT)		-0.00

TABLE 2 -- HAMMER DATA

HAMMER DESCRIPTION	VULCAN 040 HAMMER
HAMMER EFFICIENCY	.75
HAMMER ENERGY (FT-LBS)	120000.00
HAMMER EXPLOSIVE FORCE (LBS)	-0.00
NUMBER OF HAMMER SEGMENTS	2

SEGMENT NUMBER	SLACK (IN)	WEIGHT (LB)	AREA (SQ IN)	COEF OF RESTITUTION	SPRING CONSTANT (LB / IN)
1	1000.00	40000.00	1.00	.60	2780000.00
2	1000.00	27800.00	1.00	.90	0.00

TABLE 3 -- MATERIAL DATA

NUMBER OF MATERIAL TYPES = 1

MATERIAL TYPE	(TUD)	UNIT WT. (PCF)	MODULUS (PSI)
1	36.000	490.0	29000000.

TABLE 4 -- PILE SECTION DATA

TOTAL NUMBER OF PILE SECTIONS 3
NUMBER OF SECTIONS CHANGED 0

NUMBER OF SECTIONS ADDED 0
LENGTH OF FREE STANDING PILE(FT) 120.00

SECTION NUMBER	MATERIAL TYPE	WALL THICKNESS (IN)	LENGTH (FT)	STATION NUMBER TOP	STATION NUMBER BOTTOM
1	1	1.250	90.	0	90
2	1	1.500	100.	90	190
3	1	1.250	80.	190	270

TABLE 5 -- SOIL DATA

NUMBER OF TIP RESISTANCE PERCENTAGES 1
SIDE DAMPENING RESISTANCE = JSIDE .15
POINT DAMPENING RESISTANCE = JPONT .15
SOIL QUAKE FOR SIDE = QSIDE .10
SOIL QUAKE FOR POINT = QPOINT .03

TIP RESISTANCE PERCENTAGE
14.0000

TABLE 6 -- SPECIFIED BLOW COUNT DATA

NUMBER OF SPECIFIED BLOW COUNTS 4

BLOWS PER FOOT	TOLERANCE
150.	25.
200.	25.
250.	25.
300.	25.

PROB 4 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.025,MINIMUM WALL THICKNESS=1.25 IN. RU = 14

TABLE 7 -- PILE SEGMENT DATA

SEGMENT	ELEV FT	SLACK IN.	WEIGHT LBS	AREA SQ.IN.	COEF RSTYTU	SPR STIFF LBS/IN.
1	0.00	1000.00	40000.00	1.00	.60	2780000.
2	0.00	1000.00	27800.00	1.00	.90	36642910.
3	120.00	0.00	4179.19	136.46	1.00	36642910.
4	111.00	0.00	4179.19	136.46	1.00	36642910.
5	102.00	0.00	4179.19	136.46	1.00	36642910.
6	93.00	0.00	4179.19	136.46	1.00	36642910.
7	84.00	0.00	4179.19	136.46	1.00	36642910.
8	75.00	0.00	4179.19	136.46	1.00	36642910.
9	66.00	0.00	4179.19	136.46	1.00	36642910.
10	57.00	0.00	4179.19	136.46	1.00	36642910.
11	48.00	0.00	4179.19	136.46	1.00	36642910.
12	39.00	0.00	4179.19	136.46	1.00	36642910.
13	30.00	0.00	4610.13	162.58	1.00	47147562.
14	21.67	0.00	4610.13	162.58	1.00	47147562.
15	13.33	0.00	4610.13	162.58	1.00	47147562.
16	5.00	0.00	4610.13	162.58	1.00	47147562.
17	-3.33	0.00	4610.13	162.58	1.00	47147562.
18	-11.67	0.00	4610.13	162.58	1.00	47147562.
19	-20.00	0.00	4610.13	162.58	1.00	47147562.
20	-28.33	0.00	4610.13	162.58	1.00	47147562.
21	-36.67	0.00	4610.13	162.58	1.00	47147562.
22	-45.00	0.00	4610.13	162.58	1.00	47147562.
23	-53.33	0.00	4610.13	162.58	1.00	47147562.
24	-61.67	0.00	4610.13	162.58	1.00	47147562.
25	-70.00	0.00	4127.59	136.46	1.00	37100946.
26	-78.89	0.00	4127.59	136.46	1.00	37100946.
27	-87.78	0.00	4127.59	136.46	1.00	37100946.
28	-96.67	0.00	4127.59	136.46	1.00	37100946.
29	-105.56	0.00	4127.59	136.46	1.00	37100946.
30	-114.44	0.00	4127.59	136.46	1.00	37100946.
31	-123.33	0.00	4127.59	136.46	1.00	37100946.
32	-132.22	0.00	4127.59	136.46	1.00	37100946.
33	-141.11	1000.00	4127.59	136.46	1.00	37100946.

PROB 4 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.025,MINIMUM WALL THICKNESS=1.25 IN. RU = 14

TABLE 8 -- MAXIMUM STRESS DATA

TIP RESISTANCE PERCENTAGE = 14.00

PERMANENT SET OF PILE = .0409 INCHES
NUMBER OF BLOWS PER FOOT = 293.70
TOTAL INTERVALS = 118

SEG	ELEV FT	MAX C STRESS LBS/SQ.IN.	TIME N	MAX T STRESS LBS/SQ.IN.	TIME N	AREA SQ.IN.	DMAX(M) IN.	D(M) IN.	V(M) FT/SEC
1	0.00	1782025.	31	0.	74	1.000	1.169776	1.168919	-.21
2	0.00	1481205.	40	0.	0	1.000	.759061	.700713	-1.00
3	120.00	10887.	43	0.	0	136.463	.745125	.680878	-1.18
4	111.00	10925.	45	0.	0	136.463	.736585	.666758	-1.35
5	102.00	11002.	48	0.	0	136.463	.727178	.651949	-1.53
6	93.00	11159.	50	0.	0	136.463	.716851	.636415	-1.70
7	84.00	11339.	53	0.	0	136.463	.705545	.620140	-1.85
8	75.00	11535.	55	0.	0	136.463	.693147	.603197	-1.99
9	66.00	11715.	57	0.	0	136.463	.679523	.585552	-2.13
10	57.00	11881.	59	0.	0	136.463	.664533	.567160	-2.28
11	48.00	12037.	62	0.	0	136.463	.647994	.547895	-2.40
12	39.00	12191.	64	0.	0	136.463	.629681	.527790	-2.50
13	30.00	10388.	67	0.	0	162.578	.609244	.506820	-2.59
14	21.67	10624.	69	0.	0	162.578	.591290	.489635	-2.65
15	13.33	10921.	72	0.	0	162.578	.571330	.471581	-2.69
16	5.00	11260.	74	0.	0	162.578	.549230	.452592	-2.72
17	-3.33	11536.	76	0.	0	162.578	.525099	.432462	-2.74
18	-11.67	11710.	79	0.	0	162.578	.499191	.411198	-2.71
19	-20.00	11796.	81	0.	0	162.578	.471655	.388887	-2.66
20	-28.33	11782.	84	0.	0	162.578	.442871	.365427	-2.54
21	-36.67	11624.	85	0.	0	162.578	.413036	.341272	-2.36
22	-45.00	11341.	88	0.	0	162.578	.382400	.316762	-2.21
23	-53.33	10970.	90	0.	0	162.578	.350978	.291889	-2.02
24	-61.67	10567.	93	0.	0	162.578	.318802	.267114	-1.84
25	-70.00	11996.	96	0.	0	136.463	.285962	.242554	-1.64
26	-78.89	11463.	100	0.	0	136.463	.245032	.212483	-1.40
27	-87.78	10690.	101	0.	0	136.463	.206255	.184065	-1.21
28	-96.67	9579.	102	0.	0	136.463	.170950	.157629	-1.05
29	-105.56	8254.	103	0.	0	136.463	.140442	.133350	-.85
30	-114.44	6750.	104	0.	0	136.463	.115247	.111757	-.64
31	-123.33	5289.	104	0.	0	136.463	.094583	.093242	-.43
32	-132.22	4012.	107	0.	0	136.463	.078492	.078078	-.29
33	-141.11	3040.	106	0.	0	136.463	.065858	.065834	-.14

PROB 4 36-IN. DIAMETER PILES 4-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.025,MINIMUM WALL THICKNESS=1.25 IN. RU = 14

TABLE 9 -- RESISTANCE-BLOW CURVE DATA

TIP RESISTANCE PERCENTAGE = 14.00

BLOWS/FT.	RESISTANCE TOTAL-TONS	DYNAMIC PT FORCE-TONS	MAX C STRESS LBS/SQ.IN.	SEG NO.	MAX T STRESS LBS/SQ.IN.	SEG NO.
2.87	50.	19.30	11668.	12	9012.	25
4.28	100.	36.77	12058.	12	7487.	10
6.31	150.	52.61	12095.	12	6255.	10
8.99	200.	66.97	12099.	12	5193.	9
11.41	250.	80.01	12104.	12	4200.	9
15.09	300.	91.88	12108.	12	3429.	8
16.73	350.	102.68	12112.	12	2682.	7
18.57	400.	112.51	12117.	12	1454.	25
20.65	450.	121.45	12121.	12	715.	25
23.02	500.	129.60	12125.	12	27.	25
25.74	550.	137.00	12129.	12	0.	33
28.89	600.	143.71	12133.	12	0.	33
32.57	650.	149.75	12137.	12	0.	33
36.91	700.	155.25	12142.	12	0.	33
42.08	750.	160.15	12146.	12	0.	33
48.30	800.	164.41	12150.	12	0.	33
55.91	850.	168.19	12154.	12	0.	33
65.34	900.	171.65	12158.	12	0.	33
77.16	950.	174.55	12162.	12	0.	33
92.13	1000.	176.71	12166.	12	0.	33
111.25	1050.	179.33	12170.	12	0.	33
135.59	1100.	184.52	12174.	12	0.	33
164.93	1150.	190.14	12179.	12	0.	33
199.16	1200.	195.90	12183.	12	0.	33
240.58	1250.	201.72	12187.	12	0.	33
293.70	1300.	207.45	12191.	12	0.	33
365.08	1350.	212.75	12195.	12	0.	33

PROB 4 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.025,MINIMUM WALL THICKNESS=1.25 IN. RU = 14

TABLE 10 -- SPECIFIED BLOW DATA

TIP RESISTANCE PERCENTAGE = 14.00

BLOWS PER FOOT	RESISTANCE TONS
135.59	1100.
199.16	1200.
240.58	1250.
293.70	1300.

WAVE EQUATION ANALYSIS FOR 36-IN. DIAMETER PIPE PILES
MC CLELLAND REPORT DATA FOR ACMR 3-PILE STRUCTURE -- BORING 1
APRIL 19 1976

PROB
5 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER
QTIP=.10,MINIMUM WALL THICKNESS=1.25 IN. RU = 35

TABLE 1 -- PROGRAM CONTROL DATA

PILE TYPE	1	
NEW HAMMER DATA OPTION	1	
NEW MATERIAL DATA OPTION	1	
NEW PILE SECTION DATA OPTION	1	
NEW SOIL DATA OPTION	1	
SPECIFIED BLOW COUNT OPTION	1	
OUTPUT OPTION FOR STRESS	1	
BPF FOR STRESS OUTPUT OPTION		275.
ULTIMATE RESISTANCE INCREMENT (TONS)		50.0
MAX BLOWS FOR RESISTANCE-BLOW CURVE (BPF)		300.
SPECIFIED SEGMENT LENGTH (FT)		-0.00

TABLE 2 -- HAMMER DATA

HAMMER DESCRIPTION	VULCAN 040 HAMMER
HAMMER EFFICIENCY	.75
HAMMER ENERGY (FT-LBS)	120000.00
HAMMER EXPLOSIVE FORCE (LBS)	-0.00
NUMBER OF HAMMER SEGMENTS	2

SEGMENT NUMBER	SLACK (IN)	WEIGHT (LB)	AREA (SQ IN)	COEF OF RESTITUTION	SPRING CONSTANT (LB / IN)
1	1000.00	40000.00	1.00	.60	2780000.00
2	1000.00	27800.00	1.00	.90	0.00

TABLE 3 -- MATERIAL DATA

NUMBER OF MATERIAL TYPES = 1

MATERIAL TYPE	(TOD)	UNIT WT. (PCF)	MODULUS (PSI)
1	36.000	490.0	29000000.

TABLE 4 -- PILE SECTION DATA

TOTAL NUMBER OF PILE SECTIONS 3

```
NUMBER OF SECTIONS CHANGED               0
NUMBER OF SECTIONS ADDED                 0
LENGTH OF FREE STANDING PILE(FT)       120.00

SECTION   MATERIAL   WALL THICKNESS    LENGTH     STATION NUMBER
NUMBER      TYPE          (IN)          (FT)       TOP     BOTTOM

   1          1          1.250          90.          0        90
   2          1          1.500         100.         90       190
   3          1          1.250          80.        190       270

TABLE 5 -- SOIL DATA

   NUMBER OF TIP RESISTANCE PERCENTAGES       1
   SIDE DAMPENING RESISTANCE  - JSIDE       .15
   POINT DAMPENING RESISTANCE - JPONT       .15
   SOIL QUAKE FOR SIDE        - QSIDE       .10
   SOIL QUAKE FOR POINT       - QPOINT      .10

      TIP RESISTANCE
        PERCENTAGE

          35.0000

   TABLE 6 -- SPECIFIED BLOW COUNT DATA

   NUMBER OF SPECIFIED BLOW COUNTS        4

    BLOWS PER
      FOOT              TOLERANCE

       150.                25.
       200.                25.
       250.                25.
       300.                25.
```

PROB 5 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.10,MINIMUM WALL THICKNESS=1.25 IN. RU = 35

TABLE 7 -- PILE SEGMENT DATA

SEGMENT	ELEV FT	SLACK IN.	WEIGHT LBS	AREA SQ.IN.	COEF RSTITU	SPR STIFF LBS/IN.
1	0.00	1000.00	40000.00	1.00	.60	2780000.
2	0.00	1000.00	27800.00	1.00	.90	36642910.
3	120.00	0.00	4179.19	136.46	1.00	36642910.
4	111.00	0.00	4179.19	136.46	1.00	36642910.
5	102.00	0.00	4179.19	136.46	1.00	36642910.
6	93.00	0.00	4179.19	136.46	1.00	36642910.
7	84.00	0.00	4179.19	136.46	1.00	36642910.
8	75.00	0.00	4179.19	136.46	1.00	36642910.
9	66.00	0.00	4179.19	136.46	1.00	36642910.
10	57.00	0.00	4179.19	136.46	1.00	36642910.
11	48.00	0.00	4179.19	136.46	1.00	36642910.
12	39.00	0.00	4179.19	136.46	1.00	36642910.
13	30.00	0.00	4610.13	162.58	1.00	47147562.
14	21.67	0.00	4610.13	162.58	1.00	47147562.
15	13.33	0.00	4610.13	162.58	1.00	47147562.
16	5.00	0.00	4610.13	162.58	1.00	47147562.
17	-3.33	0.00	4610.13	162.58	1.00	47147562.
18	-11.67	0.00	4610.13	162.58	1.00	47147562.
19	-20.00	0.00	4610.13	162.58	1.00	47147562.
20	-28.33	0.00	4610.13	162.58	1.00	47147562.
21	-36.67	0.00	4610.13	162.58	1.00	47147562.
22	-45.00	0.00	4610.13	162.58	1.00	47147562.
23	-53.33	0.00	4610.13	162.58	1.00	47147562.
24	-61.67	0.00	4610.13	162.58	1.00	47147562.
25	-70.00	0.00	4127.59	136.46	1.00	37100946.
26	-78.89	0.00	4127.59	136.46	1.00	37100946.
27	-87.78	0.00	4127.59	136.46	1.00	37100946.
28	-96.67	0.00	4127.59	136.46	1.00	37100946.
29	-105.56	0.00	4127.59	136.46	1.00	37100946.
30	-114.44	0.00	4127.59	136.46	1.00	37100946.
31	-123.33	0.00	4127.59	136.46	1.00	37100946.
32	-132.22	0.00	4127.59	136.46	1.00	37100946.
33	-141.11	1000.00	4127.59	136.46	1.00	37100946.

PROB 5 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.10,MINIMUM WALL THICKNESS=1.25 IN. RU = 55

TABLE 8 -- MAXIMUM STRESS DATA

TIP RESISTANCE PERCENTAGE = 35.00

PERMANENT SET OF PILE = .0272 INCHES
NUMBER OF BLOWS PER FOOT = 440.70
TOTAL INTERVALS = 122

SEG	ELEV FT	MAX C STRESS LBS/SQ.IN.	TIME N	MAX T STRESS LBS/SQ.IN.	TIME N	AREA SQ.IN.	DMAX(M) IN.	D(M) IN.	V(M) FT/SEC
1	0.00	1782025.	31	0.	74	1.000	1.180319	1.177411	-.34
2	0.00	1481205.	40	0.	0	1.000	.768810	.718445	-.60
3	120.00	10887.	43	0.	0	136.463	.754977	.700732	-.72
4	111.00	10925.	45	0.	0	136.463	.746664	.689152	-.86
5	102.00	11002.	48	0.	0	136.463	.737731	.677227	-.99
6	93.00	11159.	50	0.	0	136.463	.728234	.664977	-1.12
7	84.00	11339.	53	0.	0	136.463	.718236	.652387	-1.26
8	75.00	11535.	55	0.	0	136.463	.707693	.639308	-1.39
9	66.00	11714.	57	0.	0	136.463	.696564	.625676	-1.53
10	57.00	11878.	59	0.	0	136.463	.684708	.611457	-1.64
11	48.00	12023.	62	0.	0	136.463	.671729	.596672	-1.76
12	39.00	12151.	64	0.	0	136.463	.657402	.581227	-1.86
13	30.00	10309.	66	0.	0	162.578	.641575	.565053	-1.96
14	21.67	10465.	69	0.	0	162.578	.627816	.551805	-2.04
15	13.33	10666.	71	0.	0	162.578	.612567	.537617	-2.14
16	5.00	10885.	73	0.	0	162.578	.595868	.522314	-2.24
17	-3.33	11052.	75	0.	0	162.578	.577622	.505764	-2.34
18	-11.67	11138.	78	0.	0	162.578	.557810	.487899	-2.40
19	-20.00	11180.	80	0.	0	162.578	.536723	.468825	-2.40
20	-28.33	11159.	82	0.	0	162.578	.514496	.448767	-2.37
21	-36.67	11058.	84	0.	0	162.578	.491401	.427915	-2.29
22	-45.00	10885.	87	0.	0	162.578	.467308	.406415	-2.19
23	-53.33	10659.	89	0.	0	162.578	.441868	.384375	-2.07
24	-61.67	10391.	92	0.	0	162.578	.414824	.361995	-1.96
25	-70.00	11913.	94	0.	0	136.463	.386242	.339268	-1.86
26	-78.89	11518.	99	0.	0	136.463	.349000	.310123	-1.75
27	-87.78	11373.	101	0.	0	136.463	.311871	.280753	-1.65
28	-96.67	11008.	103	0.	0	136.463	.275980	.251737	-1.43
29	-105.56	10321.	105	0.	0	136.463	.241657	.224084	-1.20
30	-114.44	9517.	105	0.	0	136.463	.208327	.197880	-.96
31	-123.33	8749.	111	0.	0	136.463	.177295	.172822	-.76
32	-132.22	7912.	110	0.	0	136.463	.150665	.149102	-.48
33	-141.11	6545.	108	0.	0	136.463	.127229	.126893	-.28

PROB 5 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.10,MINIMUM WALL THICKNESS=1.25 IN.   RU = 35

TABLE 9 -- RESISTANCE-BLOW CURVE DATA

TIP RESISTANCE PERCENTAGE = 35.00

BLOWS/FT.	RESISTANCE TOTAL-TONS	DYNAMIC PT FORCE-TONS	MAX C STRESS LBS/SQ.IN.	SEG NO.	MAX T STRESS LBS/SQ.IN.	SEG NO.
2.85	50.	48.14	11673.	12	8781.	25
4.35	100.	91.51	12087.	12	7342.	11
6.57	150.	130.66	12091.	12	6015.	10
9.54	200.	166.04	12094.	12	4817.	9
12.42	250.	198.09	12097.	12	3782.	9
16.45	300.	227.18	12101.	12	2910.	8
18.49	350.	253.62	12104.	12	2225.	7
20.84	400.	277.65	12107.	12	826.	21
23.55	450.	299.50	12110.	12	92.	22
26.73	500.	319.37	12113.	12	0.	33
30.50	550.	337.41	12117.	12	0.	33
35.04	600.	353.81	12120.	12	0.	33
40.57	650.	368.72	12123.	12	0.	33
47.44	700.	382.29	12126.	12	0.	33
56.14	750.	394.55	12129.	12	0.	33
67.39	800.	405.55	12132.	12	0.	33
82.43	850.	415.29	12136.	12	0.	33
103.30	900.	423.65	12139.	12	0.	33
133.92	950.	431.17	12142.	12	0.	33
181.88	1000.	437.96	12145.	12	0.	33
265.65	1050.	442.90	12148.	12	0.	33
440.70	1100.	446.59	12151.	12	0.	33

PROB 5 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.10,MINIMUM WALL THICKNESS=1.25 IN. RU = 35

TABLE 10 -- SPECIFIED BLOW DATA

TIP RESISTANCE PERCENTAGE = 35.00

BLOWS PER FOOT	RESISTANCE TONS
133.92	950.
181.88	1000.
265.65	1050.
289.81	1060.

WAVE EQUATION ANALYSIS FOR 36-IN. DIAMETER PIPE PILES
MC CLELLAND REPORT DATA FOR ACMR 3-PILE STRUCTURE -- BORING 1
APRIL 19 1976

PROB
6   36-IN. DIAMETER PILES 3-PILE STRUCTURE
      150FT PENETRATION -- VULCAN 040 HAMMER
      QTIP=.30,MINIMUM WALL THICKNESS=1.25 IN.   RU = 50

TABLE 1 -- PROGRAM CONTROL DATA

PILE TYPE	1	
NEW HAMMER DATA OPTION	1	
NEW MATERIAL DATA OPTION	1	
NEW PILE SECTION DATA OPTION	1	
NEW SOIL DATA OPTION	1	
SPECIFIED BLOW COUNT OPTION	1	
OUTPUT OPTION FOR STRESS	1	
BPF FOR STRESS OUTPUT OPTION		275.
ULTIMATE RESISTANCE INCREMENT (TONS)		50.0
MAX BLOWS FOR RESISTANCE-BLOW CURVE (BPF)		300.
SPECIFIED SEGMENT LENGTH (FT)		-0.00

TABLE 2 -- HAMMER DATA

HAMMER DESCRIPTION	VULCAN 040 HAMMER
HAMMER EFFICIENCY	.75
HAMMER ENERGY (FT-LBS)	120000.00
HAMMER EXPLOSIVE FORCE (LBS)	-0.00
NUMBER OF HAMMER SEGMENTS	2

SEGMENT NUMBER	SLACK (IN)	WEIGHT (LB)	AREA (SQ IN)	COEF OF RESTITUTION	SPRING CONSTANT (LB / IN)
1	1000.00	40000.00	1.00	.60	2780000.00
2	1000.00	27800.00	1.00	.90	0.00

TABLE 3 -- MATERIAL DATA

NUMBER OF MATERIAL TYPES = 1

MATERIAL TYPE	(TOD)	UNIT WT. (PCF)	MODULUS (PSI)
1	36.000	490.0	29000000.

TABLE 4 -- PILE SECTION DATA

TOTAL NUMBER OF PILE SECTIONS 3
NUMBER OF SECTIONS CHANGED 0

NUMBER OF SECTIONS CHANGED 0
NUMBER OF SECTIONS ADDED 0
LENGTH OF FREE STANDING PILE(FT) 120.00

SECTION NUMBER	MATERIAL TYPE	WALL THICKNESS (IN)	LENGTH (FT)	STATION NUMBER TOP	STATION NUMBER BOTTOM
1	1	1.250	90.	0	90
2	1	1.500	100.	90	190
3	1	1.250	80.	190	270

TABLE 5 -- SOIL DATA

NUMBER OF TIP RESISTANCE PERCENTAGES 1
SIDE DAMPENING RESISTANCE - JSIDE .15
POINT DAMPENING RESISTANCE - JPONT .15
SOIL QUAKE FOR SIDE - QSIDE .10
SOIL QUAKE FOR POINT - QPOINT .30

TIP RESISTANCE PERCENTAGE
50.0000

TABLE 6 -- SPECIFIED BLOW COUNT DATA

NUMBER OF SPECIFIED BLOW COUNTS 4

BLOWS PER FOOT	TOLERANCE
150.	25.
200.	25.
250.	25.
300.	25.

PROB 6 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.30,MINIMUM WALL THICKNESS=1.25 IN. RU = 50

TABLE 7 -- PILE SEGMENT DATA

SEGMENT	ELEV FT	SLACK IN.	WEIGHT LBS	AREA SQ.IN.	COEF RSTITU	SPR STIFF LBS/IN.
1	0.00	1000.00	40000.00	1.00	.60	2780000.
2	0.00	1000.00	27800.00	1.00	.90	36642910.
3	120.00	0.00	4179.19	136.46	1.00	36642910.
4	111.00	0.00	4179.19	136.46	1.00	36642910.
5	102.00	0.00	4179.19	136.46	1.00	36642910.
6	93.00	0.00	4179.19	136.46	1.00	36642910.
7	84.00	0.00	4179.19	136.46	1.00	36642910.
8	75.00	0.00	4179.19	136.46	1.00	36642910.
9	66.00	0.00	4179.19	136.46	1.00	36642910.
10	57.00	0.00	4179.19	136.46	1.00	36642910.
11	48.00	0.00	4179.19	136.46	1.00	36642910.
12	39.00	0.00	4179.19	136.46	1.00	36642910.
13	30.00	0.00	4610.13	162.58	1.00	47147562.
14	21.67	0.00	4610.13	162.58	1.00	47147562.
15	13.33	0.00	4610.13	162.58	1.00	47147562.
16	5.00	0.00	4610.13	162.58	1.00	47147562.
17	-3.33	0.00	4610.13	162.58	1.00	47147562.
18	-11.67	0.00	4610.13	162.58	1.00	47147562.
19	-20.00	0.00	4610.13	162.58	1.00	47147562.
20	-28.33	0.00	4610.13	162.58	1.00	47147562.
21	-36.67	0.00	4610.13	162.58	1.00	47147562.
22	-45.00	0.00	4610.13	162.58	1.00	47147562.
23	-53.33	0.00	4610.13	162.58	1.00	47147562.
24	-61.67	0.00	4610.13	162.58	1.00	47147562.
25	-70.00	0.00	4127.59	136.46	1.00	37100946.
26	-78.89	0.00	4127.59	136.46	1.00	37100946.
27	-87.78	0.00	4127.59	136.46	1.00	37100946.
28	-96.67	0.00	4127.59	136.46	1.00	37100946.
29	-105.56	0.00	4127.59	136.46	1.00	37100946.
30	-114.44	0.00	4127.59	136.46	1.00	37100946.
31	-123.33	0.00	4127.59	136.46	1.00	37100946.
32	-132.22	0.00	4127.59	136.46	1.00	37100946.
33	-141.11	1000.00	4127.59	136.46	1.00	37100946.

PROB 6 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.30,MINIMUM WALL THICKNESS=1.25 IN. RU = 50

TABLE 8 -- MAXIMUM STRESS DATA

TIP RESISTANCE PERCENTAGE = 50.00

PERMANENT SET OF PILE = .0310 INCHES
NUMBER OF BLOWS PER FOOT = 387.07
TOTAL INTERVALS = 127

SEG	ELEV FT	MAX C STRESS LBS/SQ.IN.	TIME N	MAX T STRESS LBS/SQ.IN.	TIME N	AREA SQ.IN.	DMAX(M) IN.	D(M) IN.	V(M) FT/SEC
1	0.00	1782025.	31	0.	74	1.000	1.200689	1.193692	-.47
2	0.00	1481205.	40	0.	0	1.000	.788490	.751702	-.17
3	120.00	10887.	43	0.	0	136.463	.774733	.736381	-.23
4	111.00	10925.	45	0.	0	136.463	.766588	.727523	-.30
5	102.00	11002.	48	0.	0	136.463	.758089	.718477	-.39
6	93.00	11159.	50	0.	0	136.463	.749441	.709262	-.51
7	84.00	11339.	53	0.	0	136.463	.740801	.699872	-.62
8	75.00	11534.	55	0.	0	136.463	.732362	.690351	-.72
9	66.00	11714.	57	0.	0	136.463	.724127	.680735	-.80
10	57.00	11876.	59	0.	0	136.463	.715605	.671018	-.86
11	48.00	12012.	62	0.	0	136.463	.706520	.661316	-.90
12	39.00	12122.	64	0.	0	136.463	.696657	.651619	-.93
13	30.00	10253.	66	0.	0	162.578	.685923	.641809	-1.00
14	21.67	10356.	68	0.	0	162.578	.676705	.633780	-1.09
15	13.33	10480.	70	0.	0	162.578	.666453	.625063	-1.22
16	5.00	10612.	72	0.	0	162.578	.655117	.615441	-1.33
17	-3.33	10697.	74	0.	0	162.578	.642765	.604845	-1.41
18	-11.67	10714.	77	0.	0	162.578	.629615	.593424	-1.44
19	-20.00	10703.	79	0.	0	162.578	.616204	.581452	-1.42
20	-28.33	10656.	81	0.	0	162.578	.602695	.569074	-1.37
21	-36.67	10568.	84	0.	0	162.578	.588441	.556353	-1.31
22	-45.00	10445.	86	0.	0	162.578	.572842	.543321	-1.28
23	-53.33	10300.	88	0.	0	162.578	.555898	.529781	-1.28
24	-61.67	10116.	90	0.	0	162.578	.537917	.515422	-1.30
25	-70.00	11672.	92	0.	0	136.463	.519651	.500183	-1.30
26	-78.89	11046.	93	0.	0	136.463	.497122	.480215	-1.27
27	-87.78	10473.	99	0.	0	136.463	.474821	.459753	-1.26
28	-96.67	10269.	101	0.	0	136.463	.451567	.438516	-1.20
29	-105.56	9848.	103	0.	0	136.463	.427771	.416887	-1.06
30	-114.44	9219.	103	0.	0	136.463	.403262	.395372	-.89
31	-123.33	8723.	110	0.	0	136.463	.378292	.373979	-.76
32	-132.22	8441.	113	0.	0	136.463	.354322	.352411	-.58
33	-141.11	8195.	115	0.	0	136.463	.331002	.330509	-.37

PROB 6 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.30,MINIMUM WALL THICKNESS=1.25 IN. RU = 50

TABLE 9 -- RESISTANCE-BLOW CURVE DATA

TIP RESISTANCE PERCENTAGE = 50.00

BLOWS/FT.	RESISTANCE TOTAL-TONS	DYNAMIC PT FORCE-TONS	MAX C STRESS LBS/SQ.IN.	SEG NO.	MAX T STRESS LBS/SQ.IN.	SEG NO.
2.77	50.	68.67	11656.	12	8625.	25
4.47	100.	130.30	12085.	12	7226.	11
7.14	150.	185.78	12088.	12	5823.	10
10.69	200.	235.79	12090.	12	4545.	10
14.70	250.	280.99	12093.	12	3465.	9
20.57	300.	321.79	12095.	12	2481.	9
23.97	350.	358.66	12098.	12	1583.	9
28.07	400.	392.17	12100.	12	547.	20
33.13	450.	422.74	12103.	12	0.	33
39.50	500.	450.50	12105.	12	0.	33
47.73	550.	475.12	12108.	12	0.	33
58.76	600.	496.84	12110.	12	0.	33
74.21	650.	518.87	12113.	12	0.	33
97.25	700.	540.51	12115.	12	0.	33
134.89	750.	552.98	12117.	12	0.	33
206.20	800.	560.05	12120.	12	0.	33
387.07	850.	559.15	12122.	12	0.	33

PROB 6 36-IN. DIAMETER PILES 5-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.30,MINIMUM WALL THICKNESS=1.25 IN. RU = 50

TABLE 10 -- SPECIFIED BLOW DATA

TIP RESISTANCE PERCENTAGE = 50.00

BLOWS PER FOOT	RESISTANCE TONS
134.89	750.
206.20	800.
234.20	812.
294.35	831.

```
JYJZGBR,   04/19/76, *UNITED COMPUTING* 67, APEX/SL, R,0,24

17,52,05$PIL,CM100,T1000,
17,52,05$FL       64      0,000
17,52,06$AC3400CBB0023,2777100CC )B
17,52,06, 04/19/76,JYJZGBR
17,52,06,RFL,40000,
17,52,06$FL     3392      0,001
17,52,06$FL    16384      0,001
17,52,06,MAP,OFF,
17,52,06$FL      256      0,001
17,52,06,GET,PILB(CBB0024)
17,52,10,READY =    PILB
17,52,10$FL     4096      0,001         0          0,
17,52,10$FL       72          1
17,52,10,PILB,
17,52,10$FL00 16384       0,002
17,52,12$FL01 16384       0,141       190          7
17,52,12,FL REQUIRED TO LOAD      36370B ( 15608)
17,52,12,FL REQUIRED TO EXECUTE   34000B ( 14336)
17,52,12$FL    16384      0,145
17,53,10,END PILDRI
17,53,10,COST,
17,53,10$FL    14336     39,007       158         11
17,53,11,             SERVICE UNITS=     104,6
17,53,11,            JOB COST=$       26,15
17,53,11$FL    12288     39,029         7          5
17,53,11,EXIT,
17,53,11$JT00  2368      39,030
17,53,11,    *FL*  *CPU SEC, *DISC PRUS* DISC ACC
17,53,11,*P,F, PRUS*P,F, ACC *TAPE PRUS* TAPE ACC
```

Pile Driving Resistance Curves

Pile Diameter	- 36 in.
Minimum Wall Thickness	- 1.5 in.
Penetration	- 200 ft.
	- 150 ft.
Hammer	- Vulcan 040
Quake Factor, tip	- .025 in.

6000 REMOTE BATCH

UNITED COMPUTING 67, APEX/SL, 8.0.24

15.50.58.   04/20/76.

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JJJJJJJJJJJJ  YY        YY  JJJJJJJJJJJJ    00000000      0000000  0   CCCCCCCCCC    TTTTTTTTTTTT
JJJJJJJJJJJJ  YY        YY  JJJJJJJJJJJJ   00      00    000000000    CCCCCCCCCCCC  TTTTTTTTTTTT
      JJ      YY        YY        JJ       00      00   00       00   CC        CC       TT
      JJ      YY        YY        JJ       00      00   00      0 00  CC                 TT
      JJ      YY        YY        JJ       00      00   00      0 00  CC                 TT
      JJ      YY        YY        JJ       00      00   00     0  00  CC                 TT
      JJ      YYY      YYY        JJ       00      00   00    0   00  CC                 TT
      JJ       YYY    YYY         JJ       00      00   00   0    00  CC                 TT
      JJ        YYY  YYY          JJ       00      00   00   0    00  CC                 TT
      JJ          YYYY            JJ       00      00   00   0    00  CC                 TT
      JJ           YY             JJ       00      00   00  0     00  CC                 TT
      JJ           YY             JJ       00      00   00 0      00  CC                 TT
      JJ           YY             JJ       00      00   00 0      00  CC                 TT
JJ    JJ           YY       JJ    JJ       00      00   000      00   CC        CC       TT
JJJJJJJ            YY       JJJJJJJ         00    00     000000000    CCCCCCCCCCCC       TT
 JJJJJ             YY        JJJJJ          00000000    0  0000000     CCCCCCCCCC        TT
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WAVE EQUATION ANALYSIS FOR 36-IN. DIAMETER PIPE PILES
MC CLELLAND REPORT DATA FOR ACMR 3-PILE STRUCTURE -- BORING 1
APRIL 19 1976

PROB	
1	36-IN. DIAMETER PILES 3-PILE STRUCTURE 200FT PENETRATION -- VULCAN 040 HAMMER QTIP=.025,MINIMUM WALL THICKNESS=1.5 IN. RU = 14

TABLE 1 -- PROGRAM CONTROL DATA

PILE TYPE	1	
NEW HAMMER DATA OPTION	1	
NEW MATERIAL DATA OPTION	1	
NEW PILE SECTION DATA OPTION	1	
NEW SOIL DATA OPTION	1	
SPECIFIED BLOW COUNT OPTION	1	
OUTPUT OPTION FOR STRESS	1	
BPF FOR STRESS OUTPUT OPTION		275.
ULTIMATE RESISTANCE INCREMENT (TONS)		50.0
MAX BLOWS FOR RESISTANCE-BLOW CURVE (BPF)		300.
SPECIFIED SEGMENT LENGTH (FT)		-0.00

TABLE 2 -- HAMMER DATA

HAMMER DESCRIPTION	VULCAN 040 HAMMER
HAMMER EFFICIENCY	.75
HAMMER ENERGY (FT-LBS)	120000.00
HAMMER EXPLOSIVE FORCE (LBS)	-0.00
NUMBER OF HAMMER SEGMENTS	2

SEGMENT NUMBER	SLACK (IN)	WEIGHT (LB)	AREA (SQ IN)	COEF OF RESTITUTION	SPRING CONSTANT (LB / IN)
1	1000.00	40000.00	1.00	.60	2780000.00
2	1000.00	27800.00	1.00	.90	0.00

TABLE 3 -- MATERIAL DATA

NUMBER OF MATERIAL TYPES = 1

MATERIAL TYPE	(TOD)	UNIT WT. (PCF)	MODULUS (PSI)
1	36.000	490.0	29000000.

TABLE 4 -- PILE SECTION DATA

TOTAL NUMBER OF PILE SECTIONS   4

NUMBER OF SECTIONS CHANGED 0
NUMBER OF SECTIONS ADDED 0
LENGTH OF FREE STANDING PILE(FT) 120.00

SECTION NUMBER	MATERIAL TYPE	WALL THICKNESS (IN)	LENGTH (FT)	STATION NUMBER TOP	STATION NUMBER BOTTOM
1	1	1.250	40.	0	40
2	1	1.750	100.	40	140
3	1	1.500	100.	140	240
4	1	1.500	80.	240	320

TABLE 5 -- SOIL DATA

NUMBER OF TIP RESISTANCE PERCENTAGES 1
SIDE DAMPENING RESISTANCE = JSIDE .15
POINT DAMPENING RESISTANCE = JPONT .15
SOIL QUAKE FOR SIDE = QSIDE .10
SOIL QUAKE FOR POINT = QPOINT .03

TIP RESISTANCE PERCENTAGE
14.0000

TABLE 6 -- SPECIFIED BLOW COUNT DATA

NUMBER OF SPECIFIED BLOW COUNTS 4

BLOWS PER FOOT	TOLERANCE
150.	25.
200.	25.
250.	25.
300.	25.

PROB 1 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.025, MINIMUM WALL THICKNESS=1.5 IN. RU = 14

TABLE 7 -- PILE SEGMENT DATA

SEGMENT	ELEV FT	SLACK IN.	WEIGHT LBS	AREA SQ.IN.	COEF RSTITU	SPR STIFF LBS/IN.
1	0.00	1000.00	40000.00	1.00	.60	2780000.
2	0.00	1000.00	27800.00	1.00	.90	32978619.
3	120.00	0.00	4643.54	136.46	1.00	32978619.
4	110.00	0.00	4643.54	136.46	1.00	32978619.
5	100.00	0.00	4643.54	136.46	1.00	32978619.
6	90.00	0.00	4643.54	136.46	1.00	32978619.
7	80.00	0.00	5339.52	188.30	1.00	54606898.
8	71.67	0.00	5339.52	188.30	1.00	54606898.
9	63.33	0.00	5339.52	188.30	1.00	54606898.
10	55.00	0.00	5339.52	188.30	1.00	54606898.
11	46.67	0.00	5339.52	188.30	1.00	54606898.
12	38.33	0.00	5339.52	188.30	1.00	54606898.
13	30.00	0.00	5339.52	188.30	1.00	54606898.
14	21.67	0.00	5339.52	188.30	1.00	54606898.
15	13.33	0.00	5339.52	188.30	1.00	54606898.
16	5.00	0.00	5339.52	188.30	1.00	54606898.
17	-3.33	0.00	5339.52	188.30	1.00	54606898.
18	-11.67	0.00	5339.52	188.30	1.00	54606898.
19	-20.00	0.00	4610.13	162.58	1.00	47147562.
20	-28.33	0.00	4610.13	162.58	1.00	47147562.
21	-36.67	0.00	4610.13	162.58	1.00	47147562.
22	-45.00	0.00	4610.13	162.58	1.00	47147562.
23	-53.33	0.00	4610.13	162.58	1.00	47147562.
24	-61.67	0.00	4610.13	162.58	1.00	47147562.
25	-70.00	0.00	4610.13	162.58	1.00	47147562.
26	-78.33	0.00	4610.13	162.58	1.00	47147562.
27	-86.67	0.00	4610.13	162.58	1.00	47147562.
28	-95.00	0.00	4610.13	162.58	1.00	47147562.
29	-103.33	0.00	4610.13	162.58	1.00	47147562.
30	-111.67	0.00	4610.13	162.58	1.00	47147562.
31	-120.00	0.00	4917.48	162.58	1.00	44200839.
32	-128.89	0.00	4917.48	162.58	1.00	44200839.
33	-137.78	0.00	4917.48	162.58	1.00	44200839.
34	-146.67	0.00	4917.48	162.58	1.00	44200839.
35	-155.56	0.00	4917.48	162.58	1.00	44200839.
36	-164.44	0.00	4917.48	162.58	1.00	44200839.
37	-173.33	0.00	4917.48	162.58	1.00	44200839.
38	-182.22	0.00	4917.48	162.58	1.00	44200839.
39	-191.11	1000.00	4917.48	162.58	1.00	44200839.

PROB 1 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.025,MINIMUM WALL THICKNESS=1.5 IN. RU = 14

TABLE 8 -- MAXIMUM STRESS DATA

TIP RESISTANCE PERCENTAGE = 14.00

PERMANENT SET OF PILE = .0424 INCHES
NUMBER OF BLOWS PER FOOT = 282.97
TOTAL INTERVALS = 134

SEG	ELEV FT	MAX C STRESS LBS/SQ.IN.	TIME N	MAX T STRESS LBS/SQ.IN.	TIME N	AREA SQ.IN.	DMAX(M) IN.	D(M) IN.	V(M) FT/SEC
1	0.00	1779688.	32	0.	134	1.000	1.117019	.670291	-12.04
2	0.00	1626301.	43	0.	99	1.000	.690077	.652987	-1.14
3	120.00	12264.	46	237.	92	136.463	.669866	.632731	-1.25
4	110.00	12583.	48	348.	94	136.463	.659300	.617952	-1.34
5	100.00	12836.	50	330.	96	136.463	.654137	.601428	-1.45
6	90.00	13005.	52	206.	97	136.463	.652799	.583307	-1.55
7	80.00	9452.	54	0.	0	188.300	.652353	.563759	-1.65
8	71.67	9478.	56	0.	0	188.300	.651577	.551110	-1.71
9	63.33	9504.	59	0.	0	188.300	.649935	.537731	-1.77
10	55.00	9514.	61	0.	0	188.300	.647234	.523741	-1.83
11	46.67	9492.	63	0.	0	188.300	.643262	.509274	-1.90
12	38.33	9458.	65	0.	0	188.300	.637777	.494448	-1.96
13	30.00	9451.	67	0.	0	188.300	.630639	.479379	-2.02
14	21.67	9478.	70	0.	0	188.300	.621641	.464259	-2.09
15	13.33	9560.	72	0.	0	188.300	.610622	.449326	-2.17
16	5.00	9691.	75	0.	0	188.300	.597490	.434715	-2.23
17	-3.33	9844.	77	0.	0	188.300	.582189	.420330	-2.25
18	-11.67	9991.	80	0.	0	188.300	.564783	.405992	-2.23
19	-20.00	11679.	82	0.	0	162.578	.545450	.391639	-2.22
20	-28.33	11729.	85	0.	0	162.578	.521570	.375013	-2.23
21	-36.67	11727.	87	0.	0	162.578	.496397	.358359	-2.27
22	-45.00	11663.	89	0.	0	162.578	.470262	.341536	-2.31
23	-53.33	11541.	92	0.	0	162.578	.443288	.324344	-2.35
24	-61.67	11360.	94	0.	0	162.578	.415603	.306580	-2.37
25	-70.00	11118.	96	0.	0	162.578	.387686	.288179	-2.34
26	-78.33	10819.	99	0.	0	162.578	.359531	.269455	-2.28
27	-86.67	10474.	101	0.	0	162.578	.331565	.250550	-2.19
28	-95.00	10048.	103	0.	0	162.578	.303940	.231689	-2.04
29	-103.33	9577.	106	0.	0	162.578	.276608	.213162	-1.94
30	-111.67	8996.	109	0.	0	162.578	.249563	.194712	-1.80
31	-120.00	8468.	113	0.	0	162.578	.222412	.176872	-1.65
32	-128.89	8129.	115	0.	0	162.578	.193595	.158681	-1.45
33	-137.78	7706.	116	0.	0	162.578	.166297	.141771	-1.26
34	-146.67	7015.	116	0.	0	162.578	.141454	.125970	-1.05
35	-155.56	6101.	119	0.	0	162.578	.119638	.111460	-.86
36	-164.44	5213.	119	0.	0	162.578	.102238	.098270	-.64
37	-173.33	4240.	119	0.	0	162.578	.088306	.086716	-.46
38	-182.22	3352.	117	0.	0	162.578	.076090	.076009	-.32

59 -191.11 2420. 125 0. 0 162.578 .007408 .007257 -.20

PROB 1 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.025,MINIMUM WALL THICKNESS=1.5 IN. RU = 14

TABLE 9 -- RESISTANCE-BLOW CURVE DATA

TIP RESISTANCE PERCENTAGE = 14.00

BLOWS/FT.	RESISTANCE TOTAL-TONS	DYNAMIC PT FORCE-TONS	MAX C STRESS LBS/SQ.IN.	SEG NO.	MAX T STRESS LBS/SQ.IN.	SEG NO.
2.74	50.	18.69	12889.	6	9138.	30
4.12	100.	35.91	12994.	6	8346.	29
5.89	150.	51.74	13005.	6	7440.	29
8.04	200.	66.26	13005.	6	6568.	30
10.45	250.	79.61	13005.	6	5778.	30
12.84	300.	91.89	13005.	6	5038.	30
15.60	350.	103.17	13005.	6	4340.	30
18.03	400.	113.55	13005.	6	3675.	30
19.83	450.	123.06	13005.	6	3072.	31
21.86	500.	131.79	13005.	6	2501.	31
24.16	550.	139.76	13005.	6	1946.	31
26.79	600.	147.04	13005.	6	1401.	32
29.82	650.	153.66	13005.	6	918.	32
33.34	700.	159.63	13005.	6	572.	5
37.47	750.	165.03	13005.	6	553.	5
42.35	800.	169.92	13005.	6	534.	5
48.20	850.	174.22	13005.	6	515.	5
55.27	900.	178.03	13005.	6	496.	5
63.96	950.	181.51	13005.	6	478.	5
74.74	1000.	184.68	13005.	6	459.	5
88.30	1050.	187.16	13005.	6	440.	5
105.58	1100.	189.14	13005.	6	422.	5
127.74	1150.	195.30	13005.	6	403.	5
155.67	1200.	198.15	13005.	6	385.	5
188.93	1250.	203.21	13005.	6	370.	4
229.67	1300.	208.40	13005.	6	359.	4
282.97	1350.	213.67	13005.	6	348.	4
357.70	1400.	218.95	13005.	6	337.	4

PROB 1 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.025, MINIMUM WALL THICKNESS=1.5 IN. RU = 14

TABLE 10 -- SPECIFIED BLOW DATA

TIP RESISTANCE PERCENTAGE = 14.00

BLOWS PER FOOT	RESISTANCE TONS
127.74	1150.
188.93	1250.
229.67	1300.
282.97	1350.

WAVE EQUATION ANALYSIS FOR 36-IN. DIAMETER PIPE PILES
MC CLELLAND REPORT DATA FOR ACMR 3-PILE STRUCTURE -- BORING 1
APRIL 19 1976

PROB
2 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER
QTIP=.025,MINIMUM WALL THICKNESS=1.5 IN. RU = 14

TABLE 1 -- PROGRAM CONTROL DATA

PILE TYPE	1	
NEW HAMMER DATA OPTION	1	
NEW MATERIAL DATA OPTION	1	
NEW PILE SECTION DATA OPTION	1	
NEW SOIL DATA OPTION	1	
SPECIFIED BLOW COUNT OPTION	1	
OUTPUT OPTION FOR STRESS	1	
BPF FOR STRESS OUTPUT OPTION		275.
ULTIMATE RESISTANCE INCREMENT (TONS)		50.0
MAX BLOWS FOR RESISTANCE-BLOW CURVE (BPF)		300.
SPECIFIED SEGMENT LENGTH (FT)		-0.00

TABLE 2 -- HAMMER DATA

HAMMER DESCRIPTION	VULCAN 040 HAMMER
HAMMER EFFICIENCY	.75
HAMMER ENERGY (FT-LBS)	120000.00
HAMMER EXPLOSIVE FORCE (LBS)	-0.00
NUMBER OF HAMMER SEGMENTS	2

SEGMENT NUMBER	SLACK (IN)	WEIGHT (LB)	AREA (SQ IN)	COEF OF RESTITUTION	SPRING CONSTANT (LB / IN)
1	1000.00	40000.00	1.00	.60	2780000.00
2	1000.00	27800.00	1.00	.90	0.00

TABLE 3 -- MATERIAL DATA

NUMBER OF MATERIAL TYPES = 1

MATERIAL TYPE	(TOD)	UNIT WT. (PCF)	MODULUS (PSI)
1	36.000	490.0	29000000.

TABLE 4 -- PILE SECTION DATA

TOTAL NUMBER OF PILE SECTIONS 4

NUMBER OF SECTIONS ADDED 0
LENGTH OF FREE STANDING PILE(FT) 120.00

SECTION NUMBER	MATERIAL TYPE	WALL THICKNESS (IN)	LENGTH (FT)	STATION NUMBER TOP	STATION NUMBER BOTTOM
1	1	1.250	40.	0	40
2	1	1.750	50.	40	90
3	1	1.500	100.	90	190
4	1	1.500	80.	190	270

TABLE 5 -- SOIL DATA

NUMBER OF TIP RESISTANCE PERCENTAGES 1
SIDE DAMPENING RESISTANCE = JSIDE .15
POINT DAMPENING RESISTANCE = JPONT .15
SOIL QUAKE FOR SIDE = QSIDE .10
SOIL QUAKE FOR POINT = QPOINT .03

TIP RESISTANCE PERCENTAGE
14.0000

TABLE 6 -- SPECIFIED BLOW COUNT DATA

NUMBER OF SPECIFIED BLOW COUNTS 4

BLOWS PER FOOT	TOLERANCE
150.	25.
200.	25.
250.	25.
300.	25.

PROB 2 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.025,MINIMUM WALL THICKNESS=1.5 IN. RU = 14

TABLE 7 -- PILE SEGMENT DATA

SEGMENT	ELEV FT	SLACK IN.	WEIGHT LBS	AREA SQ.IN.	COEF RSTITU	SPR STIFF LBS/IN.
1	0.00	1000.00	40000.00	1.00	.60	2780000.
2	0.00	1000.00	27800.00	1.00	.90	32978619.
3	120.00	0.00	4643.54	136.46	1.00	32978619.
4	110.00	0.00	4643.54	136.46	1.00	32978619.
5	100.00	0.00	4643.54	136.46	1.00	32978619.
6	90.00	0.00	4643.54	136.46	1.00	32978619.
7	80.00	0.00	5339.52	188.30	1.00	54606898.
8	71.67	0.00	5339.52	188.30	1.00	54606898.
9	63.33	0.00	5339.52	188.30	1.00	54606898.
10	55.00	0.00	5339.52	188.30	1.00	54606898.
11	46.67	0.00	5339.52	188.30	1.00	54606898.
12	38.33	0.00	5339.52	188.30	1.00	54606898.
13	30.00	0.00	4610.13	162.58	1.00	47147562.
14	21.67	0.00	4610.13	162.58	1.00	47147562.
15	13.33	0.00	4610.13	162.58	1.00	47147562.
16	5.00	0.00	4610.13	162.58	1.00	47147562.
17	-3.33	0.00	4610.13	162.58	1.00	47147562.
18	-11.67	0.00	4610.13	162.58	1.00	47147562.
19	-20.00	0.00	4610.13	162.58	1.00	47147562.
20	-28.33	0.00	4610.13	162.58	1.00	47147562.
21	-36.67	0.00	4610.13	162.58	1.00	47147562.
22	-45.00	0.00	4610.13	162.58	1.00	47147562.
23	-53.33	0.00	4610.13	162.58	1.00	47147562.
24	-61.67	0.00	4610.13	162.58	1.00	47147562.
25	-70.00	0.00	4917.48	162.58	1.00	44200839.
26	-78.89	0.00	4917.48	162.58	1.00	44200839.
27	-87.78	0.00	4917.48	162.58	1.00	44200839.
28	-96.67	0.00	4917.48	162.58	1.00	44200839.
29	-105.56	0.00	4917.48	162.58	1.00	44200839.
30	-114.44	0.00	4917.48	162.58	1.00	44200839.
31	-123.33	0.00	4917.48	162.58	1.00	44200839.
32	-132.22	0.00	4917.48	162.58	1.00	44200839.
33	-141.11	1000.00	4917.48	162.58	1.00	44200839.

PROB 2 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.025,MINIMUM WALL THICKNESS=1.5 IN. RU = 14

TABLE 8 -- MAXIMUM STRESS DATA

TIP RESISTANCE PERCENTAGE = 14.00

PERMANENT SET OF PILE = .0412 INCHES
NUMBER OF BLOWS PER FOOT = 291.61
TOTAL INTERVALS = 121

SEG	ELEV FT	MAX C STRESS LBS/SQ.IN.	TIME N	MAX T STRESS LBS/SQ.IN.	TIME N	AREA SQ.IN.	DMAX(M) IN.	D(M) IN.	V(M) FT/SEC
1	0.00	1779688.	32	0.	69	1.000	1.115633	1.115493	-.05
2	0.00	1626289.	43	0.	95	1.000	.679655	.666531	-.91
3	120.00	12262.	45	202.	88	136.463	.664036	.644256	-1.06
4	110.00	12561.	48	167.	89	136.463	.662588	.625135	-1.25
5	100.00	12744.	50	0.	0	136.463	.662911	.604161	-1.47
6	90.00	12797.	52	0.	0	136.463	.662515	.581699	-1.70
7	80.00	9704.	54	0.	0	188.300	.660463	.558170	-1.95
8	71.67	9128.	56	0.	0	188.300	.657522	.543392	-2.10
9	63.33	9062.	58	0.	0	188.300	.652736	.528122	-2.24
10	55.00	9009.	61	0.	0	188.300	.645774	.512539	-2.40
11	46.67	9002.	63	0.	0	188.300	.636598	.496855	-2.58
12	38.33	9067.	66	0.	0	188.300	.624951	.481138	-2.73
13	30.00	10675.	69	0.	0	162.578	.610925	.465192	-2.81
14	21.67	10937.	71	0.	0	162.578	.592214	.446209	-2.84
15	13.33	11275.	74	0.	0	162.578	.570990	.426615	-2.86
16	5.00	11681.	76	0.	0	162.578	.547215	.406700	-2.92
17	-3.33	12060.	79	0.	0	162.578	.520862	.386716	-3.01
18	-11.67	12303.	81	0.	0	162.578	.492143	.366493	-3.04
19	-20.00	12421.	84	0.	0	162.578	.461654	.345855	-3.00
20	-28.33	12412.	86	0.	0	162.578	.429661	.324590	-2.92
21	-36.67	12280.	88	0.	0	162.578	.396644	.302669	-2.72
22	-45.00	12013.	90	0.	0	162.578	.363064	.280485	-2.51
23	-53.33	11654.	92	0.	0	162.578	.329372	.257743	-2.32
24	-61.67	11161.	95	0.	0	162.578	.295133	.234751	-2.10
25	-70.00	10625.	99	0.	0	162.578	.260991	.211728	-1.88
26	-78.89	10162.	102	0.	0	162.578	.224734	.187752	-1.61
27	-87.78	9547.	103	0.	0	162.578	.190425	.164846	-1.38
28	-96.67	8573.	103	0.	0	162.578	.159145	.143193	-1.16
29	-105.56	7375.	106	0.	0	162.578	.131784	.123073	-.93
30	-114.44	6102.	106	0.	0	162.578	.109486	.105063	-.70
31	-123.33	4809.	106	0.	0	162.578	.091485	.089539	-.51
32	-132.22	3634.	105	0.	0	162.578	.077369	.076627	-.36
33	-141.11	2731.	109	0.	0	162.578	.066152	.065919	-.21

PROB 2 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.025,MINIMUM WALL THICKNESS=1.5 IN. RU = 14

TABLE 9 -- RESISTANCE-BLOW CURVE DATA

TIP RESISTANCE PERCENTAGE = 14.00

BLOWS/FT.	RESISTANCE TOTAL-TONS	DYNAMIC PT FORCE-TONS	MAX C STRESS LBS/SQ.IN.	SEG NO.	MAX T STRESS LBS/SQ.IN.	SEG NO.
3.02	50.	18.62	12657.	6	9365.	14
4.44	100.	35.71	12797.	6	7959.	24
6.20	150.	51.38	12797.	6	6942.	24
8.54	200.	65.74	12797.	6	5993.	24
11.05	250.	78.93	12797.	6	5117.	24
13.56	300.	91.06	12797.	6	4320.	25
16.39	350.	102.22	12797.	6	3593.	25
18.51	400.	112.49	12797.	6	2943.	6
20.36	450.	121.93	12797.	6	2270.	25
22.44	500.	130.62	12797.	6	1658.	25
24.79	550.	138.61	12797.	6	1078.	26
27.46	600.	145.94	12797.	6	556.	27
30.52	650.	152.65	12797.	6	327.	4
34.06	700.	158.76	12797.	6	316.	4
38.17	750.	164.29	12797.	6	305.	4
43.01	800.	169.33	12797.	6	294.	4
48.74	850.	173.85	12797.	6	284.	4
55.60	900.	177.88	12797.	6	273.	4
63.90	950.	181.59	12797.	6	262.	4
74.06	1000.	184.97	12797.	6	251.	4
86.60	1050.	187.68	12797.	6	241.	4
102.21	1100.	189.77	12797.	6	230.	4
121.71	1150.	193.82	12797.	6	225.	3
145.73	1200.	199.16	12797.	6	220.	3
173.28	1250.	204.75	12797.	6	215.	3
205.19	1300.	210.45	12797.	6	211.	3
243.54	1350.	216.25	12797.	6	206.	3
291.61	1400.	222.02	12797.	6	202.	3
354.62	1450.	227.82	12797.	6	197.	3

PROB 2 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.025,MINIMUM WALL THICKNESS=1.5 IN. RU = 14

TABLE 10 -- SPECIFIED BLOW DATA

TIP RESISTANCE PERCENTAGE = 14.00

BLOWS PER FOOT	RESISTANCE TONS
145.73	1200.
205.19	1300.
243.54	1350.
291.61	1400.

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JYJOOCT.   04/20/76. *UNITED COMPUTING* 67, APEX/SL. B,0,24

15.49.56$PIL,CM100,T1000.
15.49.56$FL      64     0.000
15.49.56$AC3400CRR0023,2777100CC )R
15.49.56. 04/20/76,JYJOOCT
15.49.56.RFL,40000.
15.49.56$FL    3392     0.000
15.49.56$FL   16384     0.000
15.49.56.MAP,OFF.
15.49.57$FL     256     0.000
15.49.57.GET,PILB(CA80024)
15.50.01.READY -   PILB
15.50.01$FL    4096     0.000        0         0.
15.50.01$FI      72         1
15.50.02.PILB.
15.50.02$FL00 16384     0.000
15.50.03$FL01 16384     0.143      190         7
15.50.03.FL REQUIRED TO LOAD     36370B ( 15608)
15.50.03.FL REQUIRED TO EXECUTE  34000B ( 14336)
15.50.03$FL   16384     0.147
15.50.28.END PILDRI
15.50.28.COST.
15.50.28$FL   14336    18.488       59         5
15.50.29.            SERVICE UNITS=     52.4
15.50.29.           JOB COST=$     13.10
15.50.29$FL   12288    18.504        7         5
15.50.29.EXIT.
15.50.29$JT00  2368    18.504
15.50.29.    *FL*  *CPU SEC. *DISC PRUS* DISC ACC
15.50.29.*P.F. PRUS*P.F. ACC *TAPE PRUS* TAPE ACC
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Pile Driving Resistance Curves

Pile Diameter	- 36 in.
Minimum Wall Thickness	- 1.5 in.
Penetration	- 200 ft.
	- 150 ft.
Hammer	- Vulcan 060
Quake Factor, tip	- .025 in.

6000 REMOTE BATCH

UNITED COMPUTING 67, APEX/SL, B.0.24

16.44.31.   04/20/76.

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JJJJJJJJJJJJ YY        YY JJJJJJJJJJJJ    00000000      000000  0  PPPPPPPPPPP  ZZZZZZZZZZZZ
JJJJJJJJJJJJ YY        YY JJJJJJJJJJJJ  00        00  0000000000   PPPPPPPPPPPP ZZZZZZZZZZZZ
      JJ     YY        YY       JJ      00        00 00        00  PP        PP Z          ZZ
      JJ     YY        YY       JJ      00        00 00       0 00 PP        PP          ZZ
      JJ     YY        YY       JJ      00        00 00       0 00 PP        PP         ZZ
      JJ     YY        YY       JJ      00        00 00      0  00 PP        PP        ZZ
      JJ     YYY      YYY       JJ      00        00 00     0   00 PPPPPPPPPPPP       ZZ
      JJ      YYY    YYY        JJ      00        00 00    0    00 PPPPPPPPPPP    ZZZZZZZZ
      JJ        YYY YYY         JJ      00        00 00   0     00 PP               ZZ
      JJ          YYYY          JJ      00        00 00  0      00 PP              ZZ
      JJ           YY           JJ      00        00 00 0       00 PP             ZZ
      JJ           YY           JJ      00        00 00 0       00 PP            ZZ
      JJ           YY           JJ      00        00 00 0       00 PP           ZZ
JJ    JJ           YY     JJ    JJ      00        00 000        00 PP          ZZ          Z
JJJJJJJ            YY     JJJJJJJ        00      00   0000000000   PP          ZZZZZZZZZZZZ
 JJJJJ             YY      JJJJJ          00000000   0  000000     PP          ZZZZZZZZZZZZ
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WAVE EQUATION ANALYSIS FOR 36-IN. DIAMETER PIPE PILES
MC CLELLAND REPORT DATA FOR ACMR 3-PILE STRUCTURE -- BORING 1
APRIL 19 1976

 PROB
   1       36-IN. DIAMETER PILES 3-PILE STRUCTURE
           200FT PENETRATION -- VULCAN 060 HAMMER
           QTIP=.025,MINIMUM WALL THICKNESS=1.5 IN.     RU = 14

TABLE 1 -- PROGRAM CONTROL DATA

     PILE TYPE                                 1
     NEW HAMMER DATA OPTION                    1
     NEW MATERIAL DATA OPTION                  1
     NEW PILE SECTION DATA OPTION              1
     NEW SOIL DATA OPTION                      1
     SPECIFIED BLOW COUNT OPTION               1
     OUTPUT OPTION FOR STRESS                  1
     BPF FOR STRESS OUTPUT OPTION                          275.
     ULTIMATE RESISTANCE INCREMENT (TONS)                  50.0
     MAX BLOWS FOR RESISTANCE-BLOW CURVE (BPF)             300.
     SPECIFIED SEGMENT LENGTH (FT)                         -0.00

TABLE 2 -- HAMMER DATA

     HAMMER DESCRIPTION            VULCAN 060 HAMMER
     HAMMER EFFICIENCY                   .75
     HAMMER ENERGY (FT-LBS)        180000.00
     HAMMER EXPLOSIVE FORCE (LBS)      -0.00
     NUMBER OF HAMMER SEGMENTS             2

     SEGMENT     SLACK       WEIGHT      AREA    COEF OF     SPRING CONSTANT
      NUMBER     (IN)         (LB)     (SQ IN) RESTITUTION     (LB / IN)

        1       1000.00   60000.00     1.00       .60        3240000.00
        2       1000.00   40200.00     1.00       .90              0.00

TABLE 3 -- MATERIAL DATA

     NUMBER OF MATERIAL TYPES =    1

        MATERIAL      (TOD)   UNIT WT.   MODULUS
          TYPE                 (PCF)      (PSI)

           1          36.000    490.0 29000000.

TABLE 4 -- PILE SECTION DATA

     TOTAL NUMBER OF PILE SECTIONS       4
     NUMBER OF SECTIONS CHANGED          0
```

LENGTH OF FREE STANDING PILE(FT)   120.00

SECTION NUMBER	MATERIAL TYPE	WALL THICKNESS (IN)	LENGTH (FT)	STATION NUMBER TOP	STATION NUMBER BOTTOM
1	1	1.250	40.	0	40
2	1	1.750	100.	40	140
3	1	1.500	100.	140	240
4	1	1.500	80.	240	320

TABLE 5 -- SOIL DATA

NUMBER OF TIP RESISTANCE PERCENTAGES 1
SIDE DAMPENING RESISTANCE = JSIDE .15
POINT DAMPENING RESISTANCE = JPONT .15
SOIL QUAKE FOR SIDE = QSIDE .10
SOIL QUAKE FOR POINT = QPOINT .03

TIP RESISTANCE PERCENTAGE
14.0000

TABLE 6 -- SPECIFIED BLOW COUNT DATA

NUMBER OF SPECIFIED BLOW COUNTS 4

BLOWS PER FOOT	TOLERANCE
150.	25.
200.	25.
250.	25.
300.	25.

PROB 1 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 060 HAMMER

QTIP=.025,MINIMUM WALL THICKNESS=1.5 IN. RU = 14

TABLE 7 -- PILE SEGMENT DATA

SEGMENT	ELEV FT	SLACK IN.	WEIGHT LBS	AREA SQ.IN.	COEF RSTITU	SPR STIFF LBS/IN.
1	0.00	1000.00	60000.00	1.00	.60	3240000.
2	0.00	1000.00	40200.00	1.00	.90	32978619.
3	120.00	0.00	4643.54	136.46	1.00	32978619.
4	110.00	0.00	4643.54	136.46	1.00	32978619.
5	100.00	0.00	4643.54	136.46	1.00	32978619.
6	90.00	0.00	4643.54	136.46	1.00	32978619.
7	80.00	0.00	5339.52	188.30	1.00	54606898.
8	71.67	0.00	5339.52	188.30	1.00	54606898.
9	63.33	0.00	5339.52	188.30	1.00	54606898.
10	55.00	0.00	5339.52	188.30	1.00	54606898.
11	46.67	0.00	5339.52	188.30	1.00	54606898.
12	38.33	0.00	5339.52	188.30	1.00	54606898.
13	30.00	0.00	5339.52	188.30	1.00	54606898.
14	21.67	0.00	5339.52	188.30	1.00	54606898.
15	13.33	0.00	5339.52	188.30	1.00	54606898.
16	5.00	0.00	5339.52	188.30	1.00	54606898.
17	-3.33	0.00	5339.52	188.30	1.00	54606898.
18	-11.67	0.00	5339.52	188.30	1.00	54606898.
19	-20.00	0.00	4610.13	162.58	1.00	47147562.
20	-28.33	0.00	4610.13	162.58	1.00	47147562.
21	-36.67	0.00	4610.13	162.58	1.00	47147562.
22	-45.00	0.00	4610.13	162.58	1.00	47147562.
23	-53.33	0.00	4610.13	162.58	1.00	47147562.
24	-61.67	0.00	4610.13	162.58	1.00	47147562.
25	-70.00	0.00	4610.13	162.58	1.00	47147562.
26	-78.33	0.00	4610.13	162.58	1.00	47147562.
27	-86.67	0.00	4610.13	162.58	1.00	47147562.
28	-95.00	0.00	4610.13	162.58	1.00	47147562.
29	-103.33	0.00	4610.13	162.58	1.00	47147562.
30	-111.67	0.00	4610.13	162.58	1.00	47147562.
31	-120.00	0.00	4917.48	162.58	1.00	44200839.
32	-128.89	0.00	4917.48	162.58	1.00	44200839.
33	-137.78	0.00	4917.48	162.58	1.00	44200839.
34	-146.67	0.00	4917.48	162.58	1.00	44200839.
35	-155.56	0.00	4917.48	162.58	1.00	44200839.
36	-164.44	0.00	4917.48	162.58	1.00	44200839.
37	-173.33	0.00	4917.48	162.58	1.00	44200839.
38	-182.22	0.00	4917.48	162.58	1.00	44200839.
39	-191.11	1000.00	4917.48	162.58	1.00	44200839.

PROB 1 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 060 HAMMER

QTIP=.025,MINIMUM WALL THICKNESS=1.5 IN. RU = 14

TABLE 8 -- MAXIMUM STRESS DATA

TIP RESISTANCE PERCENTAGE = 14.00

PERMANENT SET OF PILE = .0427 INCHES
NUMBER OF BLOWS PER FOOT = 280.78
TOTAL INTERVALS = 141

SEG	ELEV FT	MAX C STRESS LBS/SQ.IN.	TIME N	MAX T STRESS LBS/SQ.IN.	TIME N	AREA SQ.IN.	DMAX(M) IN.	D(M) IN.	V(M) FT/SEC
1	0.00	2281172.	34	0.	73	1.000	1.468829	1.466484	-.24
2	0.00	1919228.	49	0.	0	1.000	.928824	.925151	-.55
3	120.00	14413.	51	0.	0	136.463	.895952	.888169	-.72
4	110.00	14730.	54	0.	0	136.463	.875719	.859480	-.91
5	100.00	14990.	56	0.	0	136.463	.866103	.829194	-1.10
6	90.00	15141.	58	0.	0	136.463	.860748	.797562	-1.31
7	80.00	11001.	60	0.	0	188.300	.854422	.764868	-1.52
8	71.67	11024.	62	0.	0	188.300	.849518	.744582	-1.66
9	63.33	11031.	64	0.	0	188.300	.843257	.723891	-1.80
10	55.00	11011.	66	0.	0	188.300	.835453	.702927	-1.94
11	46.67	10987.	68	0.	0	188.300	.825922	.681797	-2.07
12	38.33	10992.	71	0.	0	188.300	.814471	.660615	-2.19
13	30.00	11039.	73	0.	0	188.300	.800964	.639482	-2.29
14	21.67	11136.	76	0.	0	188.300	.785286	.618473	-2.38
15	13.33	11286.	78	0.	0	188.300	.767255	.597653	-2.46
16	5.00	11500.	81	0.	0	188.300	.746940	.577094	-2.51
17	-3.33	11735.	84	0.	0	188.300	.724282	.556820	-2.55
18	-11.67	11954.	86	0.	0	188.300	.699382	.536717	-2.57
19	-20.00	14005.	89	0.	0	162.578	.672496	.516558	-2.58
20	-28.33	14085.	91	0.	0	162.578	.639811	.492917	-2.60
21	-36.67	14092.	94	0.	0	162.578	.605876	.468833	-2.59
22	-45.00	14021.	96	0.	0	162.578	.570927	.444249	-2.56
23	-53.33	13866.	98	0.	0	162.578	.535362	.419158	-2.49
24	-61.67	13641.	101	0.	0	162.578	.499336	.393717	-2.37
25	-70.00	13345.	103	0.	0	162.578	.463070	.368013	-2.26
26	-78.33	12976.	106	0.	0	162.578	.427016	.341960	-2.12
27	-86.67	12521.	108	0.	0	162.578	.391131	.315918	-1.96
28	-95.00	11987.	111	0.	0	162.578	.355238	.289890	-1.83
29	-103.33	11374.	114	0.	0	162.578	.319584	.264146	-1.67
30	-111.67	10824.	118	0.	0	162.578	.284327	.238784	-1.53
31	-120.00	10394.	119	0.	0	162.578	.250290	.214284	-1.35
32	-128.89	9781.	119	0.	0	162.578	.215925	.189432	-1.19
33	-137.78	8991.	121	0.	0	162.578	.184384	.166212	-1.05
34	-146.67	7995.	123	0.	0	162.578	.155877	.144630	-.91
35	-155.56	6898.	125	0.	0	162.578	.131408	.124992	-.75
36	-164.44	5738.	125	0.	0	162.578	.110729	.107329	-.60
37	-173.33	4733.	124	0.	0	162.578	.093562	.091840	-.45
38	-182.22	3794.	126	0.	0	162.578	.079332	.078718	-.30
39	-191.11	3059.	128	0.	0	162.578	.067738	.067506	-.20

PROB 1 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 060 HAMMER

QTIP=.025,MINIMUM WALL THICKNESS=1.5 IN. RU = 14

TABLE 9 -- RESISTANCE-BLOW CURVE DATA

TIP RESISTANCE PERCENTAGE = 14.00

BLOWS/FT.	RESISTANCE TOTAL-TONS	DYNAMIC PT FORCE-TONS	MAX C STRESS LBS/SQ.IN.	SEG NO.	MAX T STRESS LBS/SQ.IN.	SEG NO.
2.07	50.	20.57	14947.	6	10080.	28
2.90	100.	39.53	15105.	6	8994.	28
4.00	150.	56.99	15141.	6	7922.	28
5.39	200.	73.03	15141.	6	6919.	28
7.00	250.	87.79	15141.	6	5977.	29
8.74	300.	101.37	15141.	6	5127.	29
10.51	350.	113.85	15141.	6	4333.	29
12.95	400.	125.32	15141.	6	3860.	6
14.14	450.	135.88	15141.	6	3238.	6
15.46	500.	145.59	15141.	6	2371.	6
16.92	550.	154.51	15141.	6	1683.	30
18.56	600.	162.72	15141.	6	1137.	31
20.40	650.	170.26	15141.	6	611.	31
22.48	700.	177.19	15141.	6	109.	32
24.86	750.	183.56	15141.	6	0.	39
27.58	800.	189.41	15141.	6	0.	39
30.72	850.	194.77	15141.	6	0.	39
34.38	900.	199.60	15141.	6	0.	39
38.68	950.	203.83	15141.	6	0.	39
43.79	1000.	207.50	15141.	6	0.	39
49.90	1050.	210.77	15141.	6	0.	39
57.32	1100.	213.78	15141.	6	0.	39
66.41	1150.	216.35	15141.	6	0.	39
77.68	1200.	218.20	15141.	6	0.	39
91.85	1250.	219.59	15141.	6	0.	39
109.77	1300.	224.06	15141.	6	0.	39
132.49	1350.	229.16	15141.	6	0.	39
160.44	1400.	234.57	15141.	6	0.	39
192.99	1450.	239.85	15141.	6	0.	39
231.93	1500.	244.49	15141.	6	0.	39
280.78	1550.	248.67	15141.	6	0.	39
346.41	1600.	252.60	15141.	6	0.	39

PROB 1 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 060 HAMMER

QTIP=.025,MINIMUM WALL THICKNESS=1.5 IN. RU = 14

TABLE 10 -- SPECIFIED BLOW DATA

TIP RESISTANCE PERCENTAGE = 14.00

BLOWS PER FOOT	RESISTANCE TONS
132.49	1350.
192.99	1450.
231.93	1500.
280.78	1550.

```
WAVE EQUATION ANALYSIS FOR 36-IN. DIAMETER PIPE PILES
MC CLELLAND REPORT DATA FOR ACMR 3-PILE STRUCTURE -- BORING 1
APRIL 19 1976

 PROB
   2        36-IN. DIAMETER PILES 3-PILE STRUCTURE
            150FT PENETRATION -- VULCAN 040 HAMMER
            QTIP=.025,MINIMUM WALL THICKNESS=1.5 IN.     RU = 14

TABLE 1 -- PROGRAM CONTROL DATA

      PILE TYPE                                  1
      NEW HAMMER DATA OPTION                     1
      NEW MATERIAL DATA OPTION                   1
      NEW PILE SECTION DATA OPTION               1
      NEW SOIL DATA OPTION                       1
      SPECIFIED BLOW COUNT OPTION                1
      OUTPUT OPTION FOR STRESS                   1
      BPF FOR STRESS OUTPUT OPTION                       275.
      ULTIMATE RESISTANCE INCREMENT (TONS)               50.0
      MAX BLOWS FOR RESISTANCE-BLOW CURVE (BPF)          300.
      SPECIFIED SEGMENT LENGTH (FT)                      -0.00

TABLE 2 -- HAMMER DATA

      HAMMER DESCRIPTION              VULCAN 060 HAMMER
      HAMMER EFFICIENCY                     .75
      HAMMER ENERGY (FT-LBS)          180000.00
      HAMMER EXPLOSIVE FORCE (LBS)        -0.00
      NUMBER OF HAMMER SEGMENTS               2

      SEGMENT     SLACK      WEIGHT      AREA    COEF OF    SPRING CONSTANT
       NUMBER      (IN)       (LB)     (SQ IN) RESTITUTION    (LB / IN)

         1       1000.00  60000.00     1.00       .60        3240000.00
         2       1000.00  40200.00     1.00       .90              0.00

TABLE 3 -- MATERIAL DATA

      NUMBER OF MATERIAL TYPES =    1

          MATERIAL      (TOD)   UNIT WT.   MODULUS
            TYPE                 (PCF)      (PSI)

              1        36.000    490.0 29000000.

TABLE 4 -- PILE SECTION DATA

      TOTAL NUMBER OF PILE SECTIONS          4
      NUMBER OF SECTIONS CHANGED             0
```

NUMBER OF SECTIONS ADDED 0
LENGTH OF FREE STANDING PILE(FT) 120.00

SECTION NUMBER	MATERIAL TYPE	WALL THICKNESS (IN)	LENGTH (FT)	STATION NUMBER TOP	STATION NUMBER BOTTOM
1	1	1.250	40.	0	40
2	1	1.750	50.	40	90
3	1	1.500	100.	90	190
4	1	1.500	80.	190	270

TABLE 5 -- SOIL DATA

NUMBER OF TIP RESISTANCE PERCENTAGES 1
SIDE DAMPENING RESISTANCE - JSIDE .15
POINT DAMPENING RESISTANCE - JPONT .15
SOIL QUAKE FOR SIDE - QSIDE .10
SOIL QUAKE FOR POINT - QPOINT .03

TIP RESISTANCE PERCENTAGE
14.0000

TABLE 6 -- SPECIFIED BLOW COUNT DATA

NUMBER OF SPECIFIED BLOW COUNTS 4

BLOWS PER FOOT	TOLERANCE
150.	25.
200.	25.
250.	25.
300.	25.

PROB 2 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.025,MINIMUM WALL THICKNESS=1.5 IN.   RU = 14

TABLE 7 -- PILE SEGMENT DATA

SEGMENT	ELEV FT	SLACK IN.	WEIGHT LBS	AREA SQ.IN.	COEF RSTITU	SPR STIFF LBS/IN.
1	0.00	1000.00	60000.00	1.00	.60	3240000.
2	0.00	1000.00	40200.00	1.00	.90	32978619.
3	120.00	0.00	4643.54	136.46	1.00	32978619.
4	110.00	0.00	4643.54	136.46	1.00	32978619.
5	100.00	0.00	4643.54	136.46	1.00	32978619.
6	90.00	0.00	4643.54	136.46	1.00	32978619.
7	80.00	0.00	5339.52	188.30	1.00	54606898.
8	71.67	0.00	5339.52	188.30	1.00	54606898.
9	63.33	0.00	5339.52	188.30	1.00	54606898.
10	55.00	0.00	5339.52	188.30	1.00	54606898.
11	46.67	0.00	5339.52	188.30	1.00	54606898.
12	38.33	0.00	5339.52	188.30	1.00	54606898.
13	30.00	0.00	4610.13	162.58	1.00	47147562.
14	21.67	0.00	4610.13	162.58	1.00	47147562.
15	13.33	0.00	4610.13	162.58	1.00	47147562.
16	5.00	0.00	4610.13	162.58	1.00	47147562.
17	-3.33	0.00	4610.13	162.58	1.00	47147562.
18	-11.67	0.00	4610.13	162.58	1.00	47147562.
19	-20.00	0.00	4610.13	162.58	1.00	47147562.
20	-28.33	0.00	4610.13	162.58	1.00	47147562.
21	-36.67	0.00	4610.13	162.58	1.00	47147562.
22	-45.00	0.00	4610.13	162.58	1.00	47147562.
23	-53.33	0.00	4610.13	162.58	1.00	47147562.
24	-61.67	0.00	4610.13	162.58	1.00	47147562.
25	-70.00	0.00	4917.48	162.58	1.00	44200839.
26	-78.89	0.00	4917.48	162.58	1.00	44200839.
27	-87.78	0.00	4917.48	162.58	1.00	44200839.
28	-96.67	0.00	4917.48	162.58	1.00	44200839.
29	-105.56	0.00	4917.48	162.58	1.00	44200839.
30	-114.44	0.00	4917.48	162.58	1.00	44200839.
31	-123.33	0.00	4917.48	162.58	1.00	44200839.
32	-132.22	0.00	4917.48	162.58	1.00	44200839.
33	-141.11	1000.00	4917.48	162.58	1.00	44200839.

PROB 2 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.025,MINIMUM WALL THICKNESS=1.5 IN. RU = 14

TABLE 8 -- MAXIMUM STRESS DATA

TIP RESISTANCE PERCENTAGE = 14.00

PERMANENT SET OF PILE = .0433 INCHES
NUMBER OF BLOWS PER FOOT = 277.24
TOTAL INTERVALS = 136

SEG	ELEV FT	MAX C STRESS LBS/SQ.IN.	TIME N	MAX T STRESS LBS/SQ.IN.	TIME N	AREA SQ.IN.	DMAX(M) IN.	D(M) IN.	V(M) FT/SEC
1	0.00	2281172.	34	0.	74	1.000	1.478018	1.478018	-.02
2	0.00	1918744.	49	0.	0	1.000	.919705	.889438	-1.52
3	120.00	14390.	51	0.	0	136.463	.891044	.844346	-1.70
4	110.00	14633.	53	0.	0	136.463	.880969	.807410	-1.88
5	100.00	14785.	55	0.	0	136.463	.873315	.768858	-2.06
6	90.00	14820.	57	0.	0	136.463	.864442	.728985	-2.24
7	80.00	10661.	59	0.	0	188.300	.853286	.688132	-2.43
8	71.67	10586.	61	0.	0	188.300	.844471	.663014	-2.54
9	63.33	10528.	64	0.	0	188.300	.833336	.637524	-2.67
10	55.00	10499.	66	0.	0	188.300	.819780	.611782	-2.78
11	46.67	10545.	69	0.	0	188.300	.803615	.585962	-2.89
12	38.33	10719.	72	0.	0	188.300	.784689	.560231	-2.96
13	30.00	12723.	75	0.	0	162.578	.763023	.534816	-2.99
14	21.67	13122.	78	0.	0	162.578	.735179	.506059	-2.99
15	13.33	13600.	81	0.	0	162.578	.704541	.478166	-2.98
16	5.00	14138.	83	0.	0	162.578	.671168	.451200	-2.90
17	-3.33	14618.	86	0.	0	162.578	.635166	.425467	-2.79
18	-11.67	14928.	88	0.	0	162.578	.596826	.400528	-2.70
19	-20.00	15071.	90	0.	0	162.578	.556632	.375786	-2.54
20	-28.33	15051.	92	0.	0	162.578	.515114	.351063	-2.38
21	-36.67	14866.	95	0.	0	162.578	.472482	.325992	-2.18
22	-45.00	14555.	97	0.	0	162.578	.429282	.300649	-2.01
23	-53.33	14090.	100	0.	0	162.578	.385401	.274696	-1.86
24	-61.67	13537.	104	0.	0	162.578	.342021	.248331	-1.72
25	-70.00	12947.	106	0.	0	162.578	.299826	.221730	-1.58
26	-78.89	12185.	107	0.	0	162.578	.256953	.193741	-1.44
27	-87.78	11148.	108	0.	0	162.578	.216935	.166582	-1.32
28	-96.67	9894.	111	0.	0	162.578	.180484	.140916	-1.21
29	-105.56	8543.	112	0.	0	162.578	.148945	.117415	-1.12
30	-114.44	6870.	113	0.	0	162.578	.121881	.096679	-1.04
31	-123.33	5366.	111	0.	0	162.578	.099335	.079401	-.92
32	-132.22	4143.	113	0.	0	162.578	.081680	.066461	-.76
33	-141.11	3154.	114	0.	0	162.578	.068285	.057739	-.58

PROB 2 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.025, MINIMUM WALL THICKNESS=1.5 IN. RU = 14

TABLE 9 -- RESISTANCE-BLOW CURVE DATA

TIP RESISTANCE PERCENTAGE = 14.00

BLOWS/FT.	RESISTANCE TOTAL-TONS	DYNAMIC PT FORCE-TONS	MAX C STRESS LBS/SQ.IN.	SEG NO.	MAX T STRESS LBS/SQ.IN.	SEG NO.
2.24	50.	20.51	14600.	5	9795.	22
3.11	100.	39.34	14813.	6	8584.	22
4.24	150.	56.61	14820.	6	7380.	22
5.70	200.	72.48	14820.	6	6271.	23
7.42	250.	87.07	14820.	6	5262.	23
9.14	300.	100.49	14820.	6	4673.	6
12.23	350.	112.83	14820.	6	4023.	6
13.35	400.	124.20	14820.	6	3162.	6
14.58	450.	134.68	14820.	6	2300.	5
15.93	500.	144.33	14820.	6	1645.	5
17.43	550.	153.23	14820.	6	1102.	4
19.10	600.	161.44	14820.	6	142.	25
20.97	650.	169.01	14820.	6	0.	33
23.08	700.	175.99	14820.	6	0.	33
25.46	750.	182.44	14820.	6	0.	33
28.17	800.	188.41	14820.	6	0.	33
31.28	850.	193.92	14820.	6	0.	33
34.86	900.	198.94	14820.	6	0.	33
39.02	950.	203.40	14820.	6	0.	33
43.90	1000.	207.37	14820.	6	0.	33
49.66	1050.	210.90	14820.	6	0.	33
56.54	1100.	214.12	14820.	6	0.	33
64.82	1150.	217.04	14820.	6	0.	33
74.88	1200.	219.31	14820.	6	0.	33
87.23	1250.	221.01	14820.	6	0.	33
102.46	1300.	224.13	14820.	6	0.	33
121.30	1350.	229.54	14820.	6	0.	33
144.26	1400.	235.28	14820.	6	0.	33
170.24	1450.	241.14	14858.	20	0.	33
200.10	1500.	246.70	14928.	19	0.	33
234.77	1550.	251.75	15000.	19	0.	33
277.24	1600.	256.40	15071.	19	0.	33
330.70	1650.	260.85	15139.	19	0.	33

PROB 2 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.025,MINIMUM WALL THICKNESS=1.5 IN. RU = 14

TABLE 10 -- SPECIFIED BLOW DATA

TIP RESISTANCE PERCENTAGE = 14.00

BLOWS PER FOOT	RESISTANCE TONS
144.26	1400.
200.10	1500.
234.77	1550.
277.24	1600.

```
JYJOOPZ.   04/20/76. *UNITED COMPUTING* 67. APEX/SL. 8.0.24

16.42.21$PIL,CM100,T1000.
16.42.21$FL       64      0.000
16.42.21$AC3400CR80023,277710OCC )R
16.42.21. 04/20/76.JYJOOPZ
16.42.22.RFL,40000.
16.42.22$FL     3392      0.000
16.42.22$FL    16384      0.000
16.42.22.MAP,OFF.
16.42.22$FL      256      0.000
16.42.22.GET,PILB(CR80024)
16.42.27.READY -    PILB
16.42.27$FL     4096      0.000          0          0.
16.42.27$FI       72          1
16.42.28.PILB.
16.42.28$FL00 16384       0.002
16.42.32$FL01 16384       0.143       190          6
16.42.32.FL REQUIRED TO LOAD       36370B ( 15608)
16.42.32.FL REQUIRED TO EXECUTE   34000B ( 14336)
16.42.32$FL    16384      0.148
16.43.10.END PILBRI
16.43.10.COST.
16.43.10$FL    14336     22.595        60          5
16.43.12.             SERVICE UNITS*        63.0
16.43.12.            JOB COST*$        15.74
16.43.12$FL    12288     22.617         7          5
16.43.12.EXIT.
16.43.12$JT00  2368      22.617
16.43.12.     *FL*  *CPU SEC. *DISC PRUS* DISC ACC
16.43.12.*P.F. PRUS*P.F. ACC *TAPE PRUS* TAPE ACC
```

Pile Driving Resistance Curves

Pile Diameter	- 36 in.
Minimum Wall Thickness	- 1.5 in.
Penetration	- 200 ft.
	- 150 ft.
Hammer	- Vulcan 060
Quake Factor, tip	- .10 in.

6000 REMOTE BATCH

UNITED COMPUTING 67, APEX/SL. H.0.24

07.57.43.   04/21/76.

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JJJJJJJJJJJJ  YY          YY  JJJJJJJJJJJJ    00000000    PPPPPPPPPPP   NN          NN   CCCCCCCCCC
JJJJJJJJJJJJ  YY          YY  JJJJJJJJJJJJ   00      00   PPPPPPPPPPPP  NNN         NN  CCCCCCCCCCCC
     JJ       YY          YY       JJ        00      00   PP        PP  NNNN        NN  CC        CC
     JJ       YY          YY       JJ        00      00   PP        PP  NN NN       NN  CC
     JJ       YY          YY       JJ        00      00   PP        PP  NN  NN      NN  CC
     JJ       YY          YY       JJ        00      00   PP        PP  NN   NN     NN  CC
     JJ       YYY        YYY       JJ        00      00   PPPPPPPPPPPP  NN    NN    NN  CC
     JJ        YYY      YYY        JJ        00      00   PPPPPPPPPPP   NN     NN   NN  CC
     JJ         YYY    YYY         JJ        00      00   PP            NN      NNNNN   CC
     JJ           YYYY             JJ        00      00   PP            NN       NNNN   CC
     JJ            YY              JJ        00      00   PP            NN        NNN   CC
     JJ            YY              JJ        00      00   PP            NN         NN   CC
     JJ            YY              JJ        00      00   PP            NN         NN   CC
JJ   JJ            YY         JJ   JJ        00      00   PP            NN         NN   CC        CC
JJJJJJJ            YY         JJJJJJJ        00      00   PP            NN         NN  CCCCCCCCCCCC
 JJJJJ             YY          JJJJJ          00000000    PP            NN         NN   CCCCCCCCCC
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WAVE EQUATION ANALYSIS FOR 36-IN. DIAMETER PIPE PILES
MC CLELLAND REPORT DATA FOR ACMR 3-PILE STRUCTURE -- BORING 1
APRIL 19 1976

 PROB
   1        36-IN. DIAMETER PILES 3-PILE STRUCTURE
            200FT PENETRATION -- VULCAN 060 HAMMER
            QTIP=.10 ,MINIMUM WALL THICKNESS=1.5 IN.     RU = 35

TABLE 1 -- PROGRAM CONTROL DATA

     PILE TYPE                              1
     NEW HAMMER DATA OPTION                 1
     NEW MATERIAL DATA OPTION               1
     NEW PILE SECTION DATA OPTION           1
     NEW SOIL DATA OPTION                   1
     SPECIFIED BLOW COUNT OPTION            1
     OUTPUT OPTION FOR STRESS               1
     BPF FOR STRESS OUTPUT OPTION                      275.
     ULTIMATE RESISTANCE INCREMENT (TONS)              50.0
     MAX BLOWS FOR RESISTANCE-BLOW CURVE (BPF)         300.
     SPECIFIED SEGMENT LENGTH (FT)                     -0.00

TABLE 2 -- HAMMER DATA

     HAMMER DESCRIPTION              VULCAN 060 HAMMER
     HAMMER EFFICIENCY                    .75
     HAMMER ENERGY (FT-LBS)         180000.00
     HAMMER EXPLOSIVE FORCE (LBS)        -0.00
     NUMBER OF HAMMER SEGMENTS              2

     SEGMENT     SLACK       WEIGHT      AREA    COEF OF     SPRING CONSTANT
      NUMBER     (IN)         (LB)     (SQ IN) RESTITUTION      (LB / IN)

        1        1000.00  60000.00      1.00       .60        3240000.00
        2        1000.00  40200.00      1.00       .90              0.00

TABLE 3 -- MATERIAL DATA

     NUMBER OF MATERIAL TYPES =     1

         MATERIAL      (TOD)   UNIT WT.   MODULUS
           TYPE                 (PCF)      (PSI)

            1         36.000     490.0 29000000.

TABLE 4 -- PILE SECTION DATA

     TOTAL NUMBER OF PILE SECTIONS        4
```

NUMBER OF SECTIONS ADDED 0
LENGTH OF FREE STANDING PILE(FT) 120.00

SECTION NUMBER	MATERIAL TYPE	WALL THICKNESS (IN)	LENGTH (FT)	STATION NUMBER TOP	STATION NUMBER BOTTOM
1	1	1.250	40.	0	40
2	1	1.750	100.	40	140
3	1	1.500	100.	140	240
4	1	1.500	80.	240	320

TABLE 5 -- SOIL DATA

NUMBER OF TIP RESISTANCE PERCENTAGES 1
SIDE DAMPENING RESISTANCE = JSIDE .15
POINT DAMPENING RESISTANCE = JPONT .15
SOIL QUAKE FOR SIDE = QSIDE .10
SOIL QUAKE FOR POINT = QPOINT .10

TIP RESISTANCE PERCENTAGE
35.0000

TABLE 6 -- SPECIFIED BLOW COUNT DATA

NUMBER OF SPECIFIED BLOW COUNTS 4

BLOWS PER FOOT	TOLERANCE
150.	25.
200.	25.
250.	25.
300.	25.

PROB 1 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 060 HAMMER

QTIP=.10 ,MINIMUM WALL THICKNESS=1.5 IN. RU = 35

TABLE 7 -- PILE SEGMENT DATA

SEGMENT	ELEV FT.	SLACK IN.	WEIGHT LBS	AREA SQ.IN.	COEF RSTITU	SPR STIFF LBS/IN.
1	0.00	1000.00	60000.00	1.00	.60	3240000.
2	0.00	1000.00	40200.00	1.00	.90	32978619.
3	120.00	0.00	4643.54	136.46	1.00	32978619.
4	110.00	0.00	4643.54	136.46	1.00	32978619.
5	100.00	0.00	4643.54	136.46	1.00	32978619.
6	90.00	0.00	4643.54	136.46	1.00	32978619.
7	80.00	0.00	5339.52	188.30	1.00	54606898.
8	71.67	0.00	5339.52	188.30	1.00	54606898.
9	63.33	0.00	5339.52	188.30	1.00	54606898.
10	55.00	0.00	5339.52	188.30	1.00	54606898.
11	46.67	0.00	5339.52	188.30	1.00	54606898.
12	38.33	0.00	5339.52	188.30	1.00	54606898.
13	30.00	0.00	5339.52	188.30	1.00	54606898.
14	21.67	0.00	5339.52	188.30	1.00	54606898.
15	13.33	0.00	5339.52	188.30	1.00	54606898.
16	5.00	0.00	5339.52	188.30	1.00	54606898.
17	-3.33	0.00	5339.52	188.30	1.00	54606898.
18	-11.67	0.00	5339.52	188.30	1.00	54606898.
19	-20.00	0.00	4610.13	162.58	1.00	47147562.
20	-28.33	0.00	4610.13	162.58	1.00	47147562.
21	-36.67	0.00	4610.13	162.58	1.00	47147562.
22	-45.00	0.00	4610.13	162.58	1.00	47147562.
23	-53.33	0.00	4610.13	162.58	1.00	47147562.
24	-61.67	0.00	4610.13	162.58	1.00	47147562.
25	-70.00	0.00	4610.13	162.58	1.00	47147562.
26	-78.33	0.00	4610.13	162.58	1.00	47147562.
27	-86.67	0.00	4610.13	162.58	1.00	47147562.
28	-95.00	0.00	4610.13	162.58	1.00	47147562.
29	-103.33	0.00	4610.13	162.58	1.00	47147562.
30	-111.67	0.00	4610.13	162.58	1.00	47147562.
31	-120.00	0.00	4917.48	162.58	1.00	44200839.
32	-128.89	0.00	4917.48	162.58	1.00	44200839.
33	-137.78	0.00	4917.48	162.58	1.00	44200839.
34	-146.67	0.00	4917.48	162.58	1.00	44200839.
35	-155.56	0.00	4917.48	162.58	1.00	44200839.
36	-164.44	0.00	4917.48	162.58	1.00	44200839.
37	-173.33	0.00	4917.48	162.58	1.00	44200839.
38	-182.22	0.00	4917.48	162.58	1.00	44200839.
39	-191.11	1000.00	4917.48	162.58	1.00	44200839.

PROB 1 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 060 HAMMER

QTIP=.10 ,MINIMUM WALL THICKNESS=1.5 IN. RU = 35

TABLE 8 -- MAXIMUM STRESS DATA

TIP RESISTANCE PERCENTAGE = 35.00

PERMANENT SET OF PILE = .0360 INCHES
NUMBER OF BLOWS PER FOOT = 333.25
TOTAL INTERVALS = 145

SEG	ELEV FT	MAX C STRESS LBS/SQ.IN.	TIME N	MAX T STRESS LBS/SQ.IN.	TIME N	AREA SQ.IN.	DMAX(M) IN.	D(M) IN.	V(M) FT/SEC
1	0.00	2281172.	34	0.	73	1.000	1.486792	1.486708	-.04
2	0.00	1919228.	49	0.	0	1.000	.964504	.961827	-.47
3	120.00	14413.	51	0.	0	136.463	.933899	.929348	-.57
4	110.00	14730.	54	0.	0	136.463	.913054	.905390	-.67
5	100.00	14990.	56	0.	0	136.463	.893527	.879821	-.78
6	90.00	15141.	58	0.	0	136.463	.882559	.852855	-.90
7	80.00	11001.	60	0.	0	188.300	.877405	.824708	-1.03
8	71.67	11024.	62	0.	0	188.300	.873916	.807084	-1.12
9	63.33	11028.	64	0.	0	188.300	.869511	.788956	-1.21
10	55.00	11003.	66	0.	0	188.300	.863949	.770463	-1.30
11	46.67	10967.	68	0.	0	188.300	.856977	.751757	-1.41
12	38.33	10945.	70	0.	0	188.300	.848436	.732965	-1.51
13	30.00	10949.	73	0.	0	188.300	.838179	.714186	-1.60
14	21.67	10986.	75	0.	0	188.300	.826122	.695541	-1.69
15	13.33	11060.	78	0.	0	188.300	.812126	.677139	-1.77
16	5.00	11181.	80	0.	0	188.300	.796199	.658993	-1.85
17	-3.33	11328.	83	0.	0	188.300	.778336	.641060	-1.93
18	-11.67	11479.	86	0.	0	188.300	.758587	.623236	-2.02
19	-20.00	13421.	88	0.	0	162.578	.737108	.605317	-2.12
20	-28.33	13497.	90	0.	0	162.578	.710840	.584220	-2.22
21	-36.67	13529.	93	0.	0	162.578	.683440	.562721	-2.30
22	-45.00	13510.	95	0.	0	162.578	.655023	.540851	-2.35
23	-53.33	13437.	97	0.	0	162.578	.625787	.518642	-2.37
24	-61.67	13316.	100	0.	0	162.578	.596111	.496217	-2.35
25	-70.00	13147.	102	0.	0	162.578	.566120	.473596	-2.32
26	-78.33	12933.	104	0.	0	162.578	.536143	.450748	-2.25
27	-86.67	12652.	106	0.	0	162.578	.505794	.427756	-2.17
28	-95.00	12331.	109	0.	0	162.578	.474638	.404478	-2.09
29	-103.33	11904.	111	0.	0	162.578	.442548	.380903	-2.03
30	-111.67	11422.	112	0.	0	162.578	.409845	.356819	-1.98
31	-120.00	11164.	119	0.	0	162.578	.377000	.332301	-1.89
32	-128.89	10984.	121	0.	0	162.578	.342531	.305786	-1.79
33	-137.78	10715.	121	0.	0	162.578	.309196	.279225	-1.55
34	-146.67	10291.	123	0.	0	162.578	.276540	.253493	-1.32
35	-155.56	9612.	125	0.	0	162.578	.244277	.228548	-1.09
36	-164.44	9058.	129	0.	0	162.578	.212768	.204308	-.91
37	-173.33	8633.	131	0.	0	162.578	.184550	.180687	-.65
38	-182.22	7869.	130	0.	0	162.578	.159182	.157817	-.46

STOCK FORM NO. [illegible] [illegible]

PRLB 1 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 060 HAMMER

QTIP=.10 ,MINIMUM WALL THICKNESS=1.5 IN. RU = 35

TABLE 9 -- RESISTANCE-BLOW CURVE DATA

TIP RESISTANCE PERCENTAGE = 35.00

BLOWS/FT.	RESISTANCE TOTAL-TONS	DYNAMIC PT FORCE-TONS	MAX C STRESS LBS/SQ.IN.	SEG NO.	MAX T STRESS LBS/SQ.IN.	SEG NO.
2.02	50.	51.31	14994.	6	9984.	28
2.89	100.	98.45	15114.	6	8748.	27
4.07	150.	141.64	15141.	6	7564.	28
5.59	200.	181.23	15141.	6	6471.	28
7.43	250.	217.58	15141.	6	5440.	28
9.39	300.	250.95	15141.	6	4484.	28
11.45	350.	281.60	15141.	6	4045.	6
13.98	400.	309.75	15141.	6	3248.	6
15.41	450.	335.63	15141.	6	2206.	6
17.02	500.	359.41	15141.	6	1488.	5
18.83	550.	381.27	15141.	6	717.	30
20.89	600.	401.38	15141.	6	106.	30
23.25	650.	419.88	15141.	6	0.	39
25.98	700.	436.87	15141.	6	0.	39
29.15	750.	452.44	15141.	6	0.	39
32.89	800.	466.64	15141.	6	0.	39
37.34	850.	479.57	15141.	6	0.	39
42.71	900.	491.41	15141.	6	0.	39
49.27	950.	502.33	15141.	6	0.	39
57.45	1000.	512.29	15141.	6	0.	39
67.85	1050.	521.06	15141.	6	0.	39
81.41	1100.	528.53	15141.	6	0.	39
99.68	1150.	535.01	15141.	6	0.	39
125.22	1200.	541.12	15141.	6	0.	39
163.07	1250.	546.32	15141.	6	0.	39
223.76	1300.	550.23	15141.	6	0.	39
333.25	1350.	552.59	15141.	6	0.	39

PROB 1 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 060 HAMMER

QTIP=.10 ,MINIMUM WALL THICKNESS=1.5 IN. RU = 35

TABLE 10 -- SPECIFIED BLOW DATA

TIP RESISTANCE PERCENTAGE = 35.00

BLOWS PER FOOT	RESISTANCE TONS
125.22	1200.
223.76	1300.
243.83	1312.
291.94	1335.

WAVE EQUATION ANALYSIS FOR 36-IN. DIAMETER PIPE PILES
MC CLELLAND REPORT DATA FOR ACMR 3-PILE STRUCTURE -- BORING 1
APRIL 19 1976

PROB
2 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 060 HAMMER
QTIP=.10 ,MINIMUM WALL THICKNESS=1.5 IN. RU = 35

TABLE 1 -- PROGRAM CONTROL DATA

PILE TYPE	1	
NEW HAMMER DATA OPTION	1	
NEW MATERIAL DATA OPTION	1	
NEW PILE SECTION DATA OPTION	1	
NEW SOIL DATA OPTION	1	
SPECIFIED BLOW COUNT OPTION	1	
OUTPUT OPTION FOR STRESS	1	
BPF FOR STRESS OUTPUT OPTION		275.
ULTIMATE RESISTANCE INCREMENT (TONS)		50.0
MAX BLOWS FOR RESISTANCE-BLOW CURVE (BPF)		300.
SPECIFIED SEGMENT LENGTH (FT)		-0.00

TABLE 2 -- HAMMER DATA

HAMMER DESCRIPTION	VULCAN 060 HAMMER
HAMMER EFFICIENCY	.75
HAMMER ENERGY (FT-LBS)	180000.00
HAMMER EXPLOSIVE FORCE (LBS)	-0.00
NUMBER OF HAMMER SEGMENTS	2

SEGMENT NUMBER	SLACK (IN)	WEIGHT (LB)	AREA (SQ IN)	COEF OF RESTITUTION	SPRING CONSTANT (LB / IN)
1	1000.00	60000.00	1.00	.60	3240000.00
2	1000.00	40200.00	1.00	.90	0.00

TABLE 3 -- MATERIAL DATA

NUMBER OF MATERIAL TYPES = 1

MATERIAL TYPE	(TOD)	UNIT WT. (PCF)	MODULUS (PSI)
1	36.000	490.0	29000000.

TABLE 4 -- PILE SECTION DATA

TOTAL NUMBER OF PILE SECTIONS 4

NUMBER OF SECTIONS ADDED 0
LENGTH OF FREE STANDING PILE(FT) 120.00

SECTION NUMBER	MATERIAL TYPE	WALL THICKNESS (IN)	LENGTH (FT)	STATION NUMBER TOP	BOTTOM
1	1	1.250	40.	0	40
2	1	1.750	50.	40	90
3	1	1.500	100.	90	190
4	1	1.500	80.	190	270

TABLE 5 -- SOIL DATA

NUMBER OF TIP RESISTANCE PERCENTAGES 1
SIDE DAMPENING RESISTANCE = JSIDE .15
POINT DAMPENING RESISTANCE = JPONT .15
SOIL QUAKE FOR SIDE = QSIDE .10
SOIL QUAKE FOR POINT = QPOINT .10

TIP RESISTANCE PERCENTAGE
35.0000

TABLE 6 -- SPECIFIED BLOW COUNT DATA

NUMBER OF SPECIFIED BLOW COUNTS 4

BLOWS PER FOOT	TOLERANCE
150.	25.
200.	25.
250.	25.
300.	25.

PROB 2 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 060 HAMMER

QTIP=.10 ,MINIMUM WALL THICKNESS=1.5 IN. RU = 35

TABLE 7 -- PILE SEGMENT DATA

SEGMENT	ELEV FT	SLACK IN.	WEIGHT LBS	AREA SQ.IN.	COEF RSTITU	SPR STIFF LBS/IN.
1	0.00	1000.00	60000.00	1.00	.60	3240000.
2	0.00	1000.00	40200.00	1.00	.90	32978619.
3	120.00	0.00	4643.54	136.46	1.00	32978619.
4	110.00	0.00	4643.54	136.46	1.00	32978619.
5	100.00	0.00	4643.54	136.46	1.00	32978619.
6	90.00	0.00	4643.54	136.46	1.00	32978619.
7	80.00	0.00	5339.52	188.30	1.00	54606898.
8	71.67	0.00	5339.52	188.30	1.00	54606898.
9	63.33	0.00	5339.52	188.30	1.00	54606898.
10	55.00	0.00	5339.52	188.30	1.00	54606898.
11	46.67	0.00	5339.52	188.30	1.00	54606898.
12	38.33	0.00	5339.52	188.30	1.00	54606898.
13	30.00	0.00	4610.13	162.58	1.00	47147562.
14	21.67	0.00	4610.13	162.58	1.00	47147562.
15	13.33	0.00	4610.13	162.58	1.00	47147562.
16	5.00	0.00	4610.13	162.58	1.00	47147562.
17	-3.33	0.00	4610.13	162.58	1.00	47147562.
18	-11.67	0.00	4610.13	162.58	1.00	47147562.
19	-20.00	0.00	4610.13	162.58	1.00	47147562.
20	-28.33	0.00	4610.13	162.58	1.00	47147562.
21	-36.67	0.00	4610.13	162.58	1.00	47147562.
22	-45.00	0.00	4610.13	162.58	1.00	47147562.
23	-53.33	0.00	4610.13	162.58	1.00	47147562.
24	-61.67	0.00	4610.13	162.58	1.00	47147562.
25	-70.00	0.00	4917.48	162.58	1.00	44200839.
26	-78.89	0.00	4917.48	162.58	1.00	44200839.
27	-87.78	0.00	4917.48	162.58	1.00	44200839.
28	-96.67	0.00	4917.48	162.58	1.00	44200839.
29	-105.56	0.00	4917.48	162.58	1.00	44200839.
30	-114.44	0.00	4917.48	162.58	1.00	44200839.
31	-123.33	0.00	4917.48	162.58	1.00	44200839.
32	-132.22	0.00	4917.48	162.58	1.00	44200839.
33	-141.11	1000.00	4917.48	162.58	1.00	44200839.

PROB 2 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 060 HAMMER

QTIP=.10 ,MINIMUM WALL THICKNESS=1.5 IN. RU = 35

TABLE 8 -- MAXIMUM STRESS DATA

TIP RESISTANCE PERCENTAGE = 35.00

PERMANENT SET OF PILE = .0412 INCHES
NUMBER OF BLOWS PER FOOT = 291.15
TOTAL INTERVALS = 140

SEG	ELEV FT	MAX C STRESS LBS/SQ.IN.	TIME N	MAX T STRESS LBS/SQ.IN.	TIME N	AREA SQ.IN.	DMAX(M) IN.	D(M) IN.	V(M) FT/SEC
1	0.00	2281172.	34	0.	74	1.000	1.493421	1.493421	-.04
2	0.00	1918744.	49	0.	0	1.000	.944826	.926801	-1.10
3	120.00	14390.	51	0.	0	136.463	.913281	.886652	-1.21
4	110.00	14633.	53	0.	0	136.463	.897400	.855108	-1.33
5	100.00	14785.	55	0.	0	136.463	.889229	.822221	-1.43
6	90.00	14820.	57	0.	0	136.463	.881894	.788307	-1.56
7	80.00	10661.	59	0.	0	188.300	.873053	.753526	-1.70
8	71.67	10585.	61	0.	0	188.300	.866136	.731975	-1.80
9	63.33	10522.	64	0.	0	188.300	.857402	.709906	-1.94
10	55.00	10483.	66	0.	0	188.300	.846647	.687308	-2.08
11	46.67	10496.	69	0.	0	188.300	.833858	.664265	-2.21
12	38.33	10603.	72	0.	0	188.300	.818795	.640999	-2.33
13	30.00	12480.	74	0.	0	162.578	.801580	.617730	-2.41
14	21.67	12746.	77	0.	0	162.578	.779347	.591017	-2.47
15	13.33	13067.	80	0.	0	162.578	.754865	.564791	-2.51
16	5.00	13443.	82	0.	0	162.578	.728178	.539191	-2.54
17	-3.33	13786.	84	0.	0	162.578	.699305	.514416	-2.53
18	-11.67	14036.	87	0.	0	162.578	.668504	.490298	-2.51
19	-20.00	14183.	89	0.	0	162.578	.636184	.466455	-2.49
20	-28.33	14230.	91	0.	0	162.578	.602791	.442563	-2.48
21	-36.67	14169.	94	0.	0	162.578	.568097	.418309	-2.44
22	-45.00	14004.	96	0.	0	162.578	.531986	.393747	-2.37
23	-53.33	13714.	98	0.	0	162.578	.494418	.368300	-2.26
24	-61.67	13301.	101	0.	0	162.578	.456065	.343832	-2.06
25	-70.00	13070.	105	0.	0	162.578	.417424	.319103	-1.90
26	-78.89	12844.	108	0.	0	162.578	.376527	.292848	-1.76
27	-87.78	12364.	110	0.	0	162.578	.336952	.266736	-1.64
28	-96.67	11806.	109	0.	0	162.578	.298417	.240849	-1.52
29	-105.56	10982.	112	0.	0	162.578	.260653	.215631	-1.42
30	-114.44	10198.	116	0.	0	162.578	.224591	.191119	-1.32
31	-123.33	9493.	118	0.	0	162.578	.193105	.168068	-1.21
32	-132.22	8349.	117	0.	0	162.578	.165548	.146846	-1.06
33	-141.11	6864.	119	0.	0	162.578	.141216	.128179	-.89

PROB 2 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 060 HAMMER

QTIP=.10 ,MINIMUM WALL THICKNESS=1.5 IN. RU = 35

TABLE 9 -- RESISTANCE-BLOW CURVE DATA

TIP RESISTANCE PERCENTAGE = 35.00

BLOWS/FT.	RESISTANCE TOTAL-TONS	DYNAMIC PT FORCE-TONS	MAX C STRESS LBS/SQ.IN.	SEG NO.	MAX T STRESS LBS/SQ.IN.	SEG NO.
2.19	50.	51.19	14644.	5	9707.	22
3.14	100.	98.03	14820.	6	8428.	22
4.36	150.	140.85	14820.	6	7148.	22
5.96	200.	180.11	14820.	6	5960.	22
7.89	250.	216.15	14820.	6	5001.	6
9.81	300.	249.25	14820.	6	4329.	6
13.10	350.	279.67	14820.	6	3369.	6
14.42	400.	307.66	14820.	6	2430.	5
15.90	450.	333.43	14820.	6	1789.	5
17.55	500.	357.19	14820.	6	1179.	4
19.40	550.	379.09	14820.	6	751.	4
21.50	600.	399.31	14820.	6	0.	33
23.90	650.	417.97	14820.	6	0.	33
26.66	700.	435.17	14820.	6	0.	33
29.87	750.	450.96	14820.	6	0.	33
33.61	800.	465.48	14820.	6	0.	33
38.05	850.	478.77	14820.	6	0.	33
43.35	900.	490.99	14820.	6	0.	33
49.77	950.	502.36	14820.	6	0.	33
57.70	1000.	512.77	14820.	6	0.	33
67.65	1050.	521.95	14820.	6	0.	33
80.46	1100.	530.18	14820.	6	0.	33
97.42	1150.	537.31	14820.	6	0.	33
120.61	1200.	543.75	14820.	6	0.	33
153.96	1250.	549.79	14820.	6	0.	33
205.01	1300.	554.63	14820.	6	0.	33
291.15	1350.	557.94	14820.	6	0.	33
461.01	1400.	562.08	14820.	6	0.	33

PROB 2 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 060 HAMMER

QTIP=.10 ,MINIMUM WALL THICKNESS=1.5 IN. RU = 35

TABLE-10 -- SPECIFIED BLOW DATA

TIP RESISTANCE PERCENTAGE = 35.00

BLOWS PER FOOT	RESISTANCE TONS
153.96	1250.
205.01	1300.
243.55	1326.
291.15	1350.

```
JYJOPNC.    04/20/76. *UNITED COMPUTING* 67. APEX/SL. H.0.24

18.08.14$PIL.CM100,T1000.
18.08.14$FL       64      0.000
18.08.15$AC3400C880023,2777100CC )H
18.08.15. 04/20/76.JYJOPNC
18.08.15.RFL,40000.
18.08.16$FL     3392      0.001
18.08.16$FL    16384      0.001
18.08.16.MAP,OFF.
18.08.16$FL      256      0.001
18.08.16.GET,PILB(CA80024)
18.08.19.READY =   PILB
18.08.19$FL     4096      0.001         0          0.
18.08.19$FI       72          1
18.08.19.PILB.
18.08.19$FL00 16384       0.001
18.08.20$FL01 16384       0.139       190          6
18.08.20.FL REQUIRED TO LOAD      36370B ( 15608)
18.08.20.FL REQUIRED TO EXECUTE   34000B ( 14336)
18.08.20$FL    16384      0.143
18.08.49.END PILORI
18.08.49.COST.
18.08.49$FL    14336     21.092        58          6
18.08.50.           SERVICE UNITS=       59.1
18.08.50.             JOB COSTS=      14.77
18.08.50$FL    12288     21.111         7          5
18.08.50.EXIT.
18.08.50$JT00   2368     21.111
18.08.50.    *FL*  *CPU SEC. *DISC PRUS* DISC ACC
18.08.50.*P.F. PRUS*P.F. ACC *TAPE PRUS* TAPE ACC
```

A-3 LATERALLY LOADED PILE CAPACITY

C.CHERN 00442705 9107 LEC9011 SYSMSG

LEC9011

JOB 9107

SYSMSG

C.CHERN 00442705 9107 LEC9011 SYSMSG

```
ISV40 JOB ORIGIN FROM GROUP=RM027    , DSP=CR , DEVICE=RM027RD1, 0A5
//LEC9011 JOB (00442705002777100TLEC27011),'C,CHERN    ',PRTY=4,CLASS=A,C
// TIME=(005),REGION=256K
//*MAIN LINES=(005,*),CARDS=(00,C)
//JOBLIB   DD DSN=DCPROD,LIB03,DISP=SHR
//         EXEC PGM=TNKC997
//FT06F001 DD SYSOUT=A
//FT05F001 DD *
/*

LEC9011  IEF403I LEC9011  STARTED     TIME=18,13,41
LEC9011  IEF234E D 6AB,ASP6AB
*LEC9011 *07 IECASP0 6AB IS LEC9011  A                       FT06F001
*LEC9011 *08 IECASP0 6B2 IS LEC9011                          ASPI0001
LEC9011  IEC202F K 6B2,019107,PL,LEC9011,
LEC9011  TI=LEC9011 CC=00442705 P=2777100 T J=LEC27011 N=C,CHERN     A=9107
LEC9011  IEF404I LEC9011  ENDED       TIME=18,14,05
//LEC9011 JOB (00442705002777100TLEC27011),'C,CHERN    ',PRTY=4,CLASS=A,*
// TIME=(005),REGION=256K
//JOBLIB   DD DSN=DCPROD,LIB03,DISP=SHR
//         EXEC PGM=TNKC997
//FT06F001 DD SYSOUT=A
//FT05F001 DD UNIT=(CTC,,DEFER),DSNAME=&&ASPI0001,                  *
// DISP=(OLD,DELETE),VOL=SER=019107,DCB=(LRECL=80,BLKSIZE=80,RECFM=F)
//
IEF236I ALLOC. FOR LEC9011
IEF237I 147    ALLOCATED TO JOBLIB
IEF237I 6AB    ALLOCATED TO FT06F001
IEF237I 6B2    ALLOCATED TO FT05F001
IEF142I - STEP WAS EXECUTED - COND CODE 0000
IEF285I   DCPROD,LIB03                                       PASSED
IEF285I   VOL SER NOS= DCS002,
IEF285I   SYS76113,T181332,RV001,LEC9011,ASPOA001            DELETED
IEF285I   VOL SER NOS= ASP6AB,
IEF285I   SYS76113,T181332,RV001,LEC9011,ASPI0001            DELETED
IEF285I   VOL SER NOS= 019107,
IEF373I STEP /          / START 76113,1813
IEF374I STEP /          / STOP  76113,1813 CPU    0MIN 01,33SEC STOR VIRT 100K
$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
$                                                                                                                                  $
$                                                         PACES DATA ACQUISITION SYSTEM                                            $
$                                                                                                                                  $
* STEP NAME                         START TIME 18,13,40,86    MAIN CORE REQD   256 K    LCS CORE REQD     0 K    STEP CPU      00,00,01,33 *
* PGM NAME      TNKC997             STOP  TIME 18,13,58,61    MAIN CORE USED   100 K    LCS CORE USED     0 K    JOB  CPU      00,00,01,33 *
* DISPATCH PRTY  1                  ELAP, TIME 00,00,17,75    MAIN CORE BORRWD   0 K    LCS CORE BORRWD   0 K    CONDITION CODE       0000 *
*                                                                                                                                          *
$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
$                                                               EXCP STATISTICS                                                    $
$                                                                                                                                  $
$ UNIT   EXCP COUNT      UNIT   EXCP COUNT      UNIT   EXCP COUNT      UNIT   EXCP COUNT      UNIT   EXCP COUNT      UNIT   EXCP COUNT  $
$                                                                                                                                  $
$  347            0       6AB          428       6B2           42                                                                  $
$                                                           EXCP TOTAL        470                                                  $
$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
IEF374I STEP/           / TOTAL EXCP 000470
IEF285I   DCPROD,LIB03                                       KEPT
IEF285I   VOL SER NOS= DCS002,
IEF375I   JOB /LEC9011 / START 76113,1813
```

PACES DATA ACQUISITION SYSTEM

JOB LOG NUMBER = LFC9011 76113 18.13.32.30					
PROGRAMMER	C.CHERN	DATE	04/22/76 76.113	INITIATION TIME	18.13.40.86
ACCTG DATA	0044270500277710OTLEC27011	CPU TIME	00.00.01.33	TERMINATION TIME	18.14.03.87
JOBNAME	LFC9011	PRIORITY	02	ELAPSED TIME	00.00.23.01
SYSTEM ID	58 = 50	CLASS	A	COMPLETION STATUS	C0000

C.CHERN 00442705 9107 A LEC9011 FT06F001

LEC9011

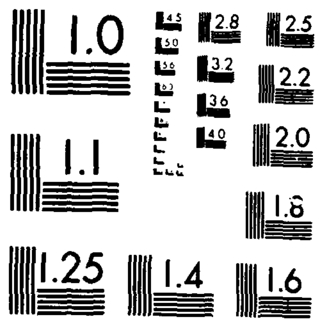
JOB9107

FT06F001

C.CHERN 00442705 9107 A LEC9011 FT06F001

AD-A164 421 STRUCTURAL CONCEPT ANALYSIS REPORT FOR THE EAST COAST AIR COMBAT MANEUVER..(U) CREST ENGINEERING INC TULSA OK MAY 76 27-771-92-APP-C CHES/NAVFAC-FPO-7601-APP-C 5/7

UNCLASSIFIED N62477-76-C-0179 F/G 13/13 NL



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

```
LATERALLY LOADED PILE PROGRAM

BEAM COLUMN ANALYSIS USING RIGID LINK FINITE ELEMENT TECHNIQUES

NUMBER OF PROBLEMS IN SET =     1

GENERAL PROBLEM TITLE =   3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN
```

```
PROBLEM DESCRIPTION = MUDLINE CONDITIONS  V=51.8KIP  H=7327251  P=1460KIP TENSION

TABLE 1 - PROGRAM CONTROLS DATA FOR PROB NO.    1

PRIOR DATA OPTIONS (HOLD = 1)     DEFLS.            TABLE NUMBER
                                              2     3     4A     4B     5

                                        0     0     0     0      0      0

NUMBER OF CARDS INPUT THIS PROBLEM                  TABLE NUMBER
                                              2     3     4A     4B     5

                                              1     0     2      5     30

LIST OF MONITOR STATIONS =      5    10    15    20    30

    TABLE 2 CONSTANTS AND ITERATION CONTROL DATA

NUMBER OF INCREMENTS =      60
CALCULATE STRESSES (YES =1) (NO = 0)      1
INCREMENT LENGTH =  0.3600 02
MAXIMUM ALLOWABLE DEFLECTION =  0.1000 03
DEFLECTION CONTROL TOLERANCE =  0.100D-02
MODULUS OF ELASTICITY =  0.3000 05
PILE RADIUS =  0.1800 02
STA. AT WHICH FORCES AND DEFLECTIONS SPECIFIED FOR RETENTION =      1

DEFLECTION CLOSURE TOLERANCE LESS THAN 0.001 SUGGESTED
```

TABLE 3 - SPECIFIED DEFLECTIONS AND SLOPES

STATION	CASE	DEFLECTION	SLOPE

NONE SPECIFIED

TABLE 4A - PILE PROPERTIES

PROGRAM AUTOMATICALLY AVERAGES MOMENT OF INERTIA
AND AREA VALUES AT CHANGES IN A AND I THUS, I
VALUES FOR TOP AND BOTTOM ELEMENTS ARE HALVED.

FROM STA.	TO STA.	I	A
0	7	0.277D 05	0.188D 03
7	60	0.242D 05	0.163D 03

TABLE 4F - PILE LOADINGS

FROM	TO	CONT.	Q	S	T	R	P
0	0	0	0.518D 02	0.0	0.0	0.733D 07	0.0
0		1	0.0	0.0	0.0	0.0	0.146D 04
	7	1	0.0	0.0	0.0	0.0	0.126D 04
	33	1	0.0	0.0	0.0	0.0	0.860D 03
	48	0	0.0	0.0	0.0	0.0	0.200D 02

PROGRAM ASSUMES LOADING OF TABLES 4B AND 5 IS APPLIED AS CONCENTRATED LOADING AT INCREMENT POINTS. THEORETICAL SPRINGS CONNECTING RIGID FINITE ELEMENTS ARE LOCATED AT INCREMENT POINTS.

TABLE 5 - NONLINEAR LOAD AND SUPPORT CURVES

FROM	TO	CONT.	QMULTIPLIER	WMULTIPLIER	TOTAL NO. OF POINTS	SYMMETRY
0		1	-0.3000-01	0.1000-02	2	1

ACTUAL Q-W CURVE POINTS

Q	0.3000 04	0.0	0.0	-0.3000 04
W	-0.9900 02	-0.9800 02	0.9800 02	0.9900 02

FROM	TO	CONT.	QMULTIPLIER	WMULTIPLIER	TOTAL NO. OF POINTS	SYMMETRY
	2	1	-0.3000-01	0.1000-02	2	1

ACTUAL Q-W CURVE POINTS

Q	0.3000 04	0.0	0.0	-0.3000 04
W	-0.9900 02	-0.9800 02	0.9800 02	0.9900 02

FROM	TO	CONT.	QMULTIPLIER	WMULTIPLIER	TOTAL NO. OF POINTS	SYMMETRY
	3	1	-0.3000-01	0.1000-02	8	1

ACTUAL Q-W CURVE POINTS

Q	0.8790 01	0.8790 01	0.8790 01	0.6660 01	0.6060 01	0.5220 01	0.4320 01	0.3060 01
W	-0.9990 02	-0.2000 02	-0.1130 01	-0.5000 00	-0.3000 00	-0.1800 00	-0.7000-01	-0.1600-01
Q	-0.3060 01	-0.4320 01	-0.5220 01	-0.6060 01	-0.6660 01	-0.8790 01	-0.8790 01	-0.8790 01
W	0.1600-01	0.7000-01	0.1800 00	0.3000 00	0.5000 00	0.1130 01	0.2000 02	0.9990 02

FROM	TO	CONT.	QMULTIPLIER	WMULTIPLIER	TOTAL NO. OF POINTS	SYMMETRY
	5	1	-0.3000-01	0.1000-02	8	1

ACTUAL Q-W CURVE POINTS

Q	0.690D 02	0.890D 02	0.690D 02	0.556D 02	0.430D 02	0.330D 02	0.207D 02	0.798D 01
W	-0.999D 02	-0.200D 02	-0.113D 01	-0.500D 00	-0.290D 00	-0.170D 00	-0.630D-01	-0.900D-02
Q	-0.798D 01	-0.207D 02	-0.333D 02	-0.430D 02	-0.556D 02	-0.890D 02	-0.690D 02	-0.890D 02
W	0.900D-02	0.630D-01	0.170D 00	0.290D 00	0.500D 00	0.113D 01	0.200D 02	0.999D 02

FROM	TO CONT.	QMULTIPLIER	WMULTIPLIER	TOTAL NO. OF POINTS	SYMMETRY
7	1	-0.300D-01	0.100D-02	8	1

ACTUAL Q-W CURVE POINTS

Q	0.187D 03	0.187D 03	0.187D 03	0.117D 03	0.908D 02	0.711D 02	0.456D 02	0.229D 02
W	-0.999D 02	-0.200D 02	-0.113D 01	-0.500D 00	-0.300D 00	-0.180D 00	-0.710D-01	-0.170D-01
Q	-0.229D 02	-0.456D 02	-0.711D 02	-0.908D 02	-0.117D 03	-0.187D 03	-0.187D 03	-0.187D 03
W	0.170D-01	0.710D-01	0.180D 00	0.300D 00	0.500D 00	0.113D 01	0.200D 02	0.999D 02

FROM	TO CONT.	QMULTIPLIER	WMULTIPLIER	TOTAL NO. OF POINTS	SYMMETRY
9	1	-0.300D-01	0.100D-02	8	1

ACTUAL Q-W CURVE POINTS

Q	0.209D 03	0.209D 03	0.209D 03	0.131D 03	0.101D 03	0.788D 02	0.495D 02	0.218D 02
W	-0.999D 02	-0.200D 02	-0.113D 01	-0.500D 00	-0.290D 00	-0.170D 00	-0.660D-01	-0.120D-01
Q	-0.218D 02	-0.495D 02	-0.788D 02	-0.101D 03	-0.131D 03	-0.209D 03	-0.209D 03	-0.209D 03
W	0.120D-01	0.660D-01	0.170D 00	0.290D 00	0.500D 00	0.113D 01	0.200D 02	0.999D 02

FROM	TO CONT.	QMULTIPLIER	WMULTIPLIER	TOTAL NO. OF POINTS	SYMMETRY
12	1	-0.300D-01	0.100D-02	8	1

ACTUAL Q-W CURVE POINTS

Q	0.492D 03	0.492D 03	0.492D 03	0.307D 03	0.242D 03	0.194D 03	0.150D 03	0.897D 02
W	-0.999D 02	-0.200D 02	-0.113D 01	-0.500D 00	-0.300D 00	-0.190D 00	-0.900D-01	-0.380D-01
Q	-0.897D 02	-0.150D 03	-0.194D 03	-0.242D 03	-0.307D 03	-0.492D 03	-0.492D 03	-0.492D 03

W	0.3800-01	0.9000-01	0.1900 00	0.3000 00	0.5000 00	0.1130 01	0.2000 02	0.9990 02

FROM	TO	CONT.	QMULTIPLIER	WMULTIPLIER	TOTAL NO. OF POINTS	SYMMETRY
	19	1	-0.3000-01	0.1000-02	8	1

ACTUAL Q-W CURVE POINTS

Q	0.7650 03	0.7650 03	0.7650 03	0.4780 03	0.3770 03	0.3020 03	0.2100 03	0.1400 03
W	-0.9990 02	-0.2000 02	-0.1130 01	-0.5000 00	-0.3000 00	-0.1900 00	-0.9000-01	-0.3800-01
Q	-0.1400 03	-0.2100 03	-0.3020 03	-0.3770 03	-0.4780 03	-0.7650 03	-0.7650 03	-0.7650 03
W	0.3800-01	0.9000-01	0.1900 00	0.3000 00	0.5000 00	0.1130 01	0.2000 02	0.9990 02

FROM	TO	CONT.	QMULTIPLIER	WMULTIPLIER	TOTAL NO. OF POINTS	SYMMETRY
	26	1	-0.3000-01	0.1000-02	8	1

ACTUAL Q-W CURVE POINTS

Q	0.1070 04	0.1070 04	0.1070 04	0.6660 03	0.5250 03	0.4210 03	0.2920 03	0.1940 03
W	-0.9990 02	-0.2000 02	-0.1130 01	-0.5000 00	-0.3000 00	-0.1900 00	-0.9000-01	-0.3800-01
Q	-0.1940 03	-0.2920 03	-0.4210 03	-0.5250 03	-0.6660 03	-0.1070 04	-0.1070 04	-0.1070 04
W	0.3800-01	0.9000-01	0.1900 00	0.3000 00	0.5000 00	0.1130 01	0.2000 02	0.9990 02

FROM	TO	CONT.	QMULTIPLIER	WMULTIPLIER	TOTAL NO. OF POINTS	SYMMETRY
	49	1	-0.3000-01	0.1000-02	8	1

ACTUAL Q-W CURVE POINTS

Q	0.1990 04	0.1990 04	0.1990 04	0.1250 04	0.9830 03	0.7880 03	0.5470 03	0.3640 03
W	-0.9990 02	-0.2000 02	-0.1130 01	-0.5000 00	-0.3000 00	-0.1900 00	-0.9000-01	-0.3800-01
Q	-0.3640 03	-0.5470 03	-0.7880 03	-0.9830 03	-0.1250 04	-0.1990 04	-0.1990 04	-0.1990 04
W	0.3800-01	0.9000-01	0.1900 00	0.3000 00	0.5000 00	0.1130 01	0.2000 02	0.9990 02

PROBLEM NUMBER = 1

PROBLEM DESCRIPTION = MUDLINE CONDITIONS V=51.8KIP R=7327251 P=1460KIP TENSION

ITERATION MONITOR DATA

ITER. NUM.	OFF CURVES	NO. STAS. NOT CLOSED	DEFLS. AT MONITOR STAS. 5	10	15	20	30
1	NO	13	0.249D-01	-0.299D-02	0.212D-04	0.161D-04	0.923D-07
2	NO	9	0.491D-01	-0.367D-02	-0.140D-03	0.353D-04	0.132D-06
3	NO	9	0.531D-01	-0.361D-02	-0.180D-03	0.388D-04	0.135D-06
4	NO	0	0.531D-01	-0.361D-02	-0.180D-03	0.388D-04	0.135D-06

RESULTS

STA.	DIST. ALONG PILE	DEFL.	SLOPE	MOMENT	BEAM COLUMN SHEAR	APPLIED NON LINEAR LATERAL LOADING	COMBINED STRESS(MAX.)
0	0.0	0.206	-0.6482D-03	-0.4750 04		0.0	10.854
1	36.000	0.179	-0.8145D-03	-0.2930 04	50.635	0.0	9.515
2	72.000	0.147	-0.9019D-03	-0.1110 04	50.535	0.0	8.181
3	108.000	0.114	-0.9104D-03	0.7130 03	48.209	-4.679	7.773
4	144.000	0.082	-0.8437D-03	0.2370 04	39.161	-13.647	8.695
5	180.000	0.053	-0.7160D-03	0.3530 04	23.354	-16.351	9.301
6	216.000	0.030	-0.5518D-03	0.4050 04	4.169	-20.684	9.484
7	252.000	0.013	-0.3757D-03	0.3830 04	-15.071	-18.068	9.833
8	288.000	0.003	-0.2139D-03	0.2960 04	-26.317	-4.841	9.838
9	324.000	-0.002	-0.9258D-04	0.1930 04	-26.770	3.630	8.977
10	360.000	-0.004	-0.1948D-04	0.1030 04	-21.260	7.209	8.216
11	396.000	-0.003	0.1647D-04	0.4000 03	-13.959	7.347	7.650
12	432.000	-0.002	0.2714D-04	0.3060 02	-7.395	5.716	7.281
13	468.000	-0.001	0.2460D-04	-0.1330 03	-2.735	3.611	7.262
14	504.000	-0.001	0.1719D-04	-0.1660 03	-0.049	1.778	7.193
15	540.000	-0.000	0.9683D-05	-0.1360 03	1.094	0.526	7.076
16	576.000	0.000	0.4133D-05	-0.8760 02	1.277	-0.147	6.946
17	612.000	0.000	0.8628D-06	-0.4430 02	1.006	-0.388	6.819
18	648.000	0.000	-0.6114D-06	-0.1510 02	0.620	-0.381	6.703
19	684.000	0.000	-0.9791D-06	0.3100 00	0.294	-0.271	6.598
20	720.000	0.000	-0.8223D-06	0.6010 01	0.083	-0.150	6.508
21	756.000	0.000	-0.5167D-06	0.6310 01	-0.021	-0.059	6.413
22	792.000	0.000	-0.2487D-06	0.4500 01	-0.054	-0.007	6.318
23	828.000	-0.000	-0.7662D-07	0.2490 01	-0.049	0.015	6.222
24	864.000	-0.000	0.7392D-08	0.9450 00	-0.032	0.019	6.126
25	900.000	-0.000	0.3372D-07	0.1170 00	-0.016	0.014	6.031
26	936.000	-0.000	0.3151D-07	-0.2060 00	-0.005	0.008	5.937
27	972.000	-0.000	0.2026D-07	-0.2460 00	0.000	0.003	5.843
28	1008.000	-0.000	0.9667D-08	-0.1790 00	0.002	0.000	5.748
29	1044.000	0.000	0.2912D-08	-0.9470-01	0.002	-0.001	5.654
30	1080.000	0.000	-0.2915D-09	-0.3450-01	0.001	-0.001	5.559
31	1116.000	0.000	-0.1216D-08	-0.2830-02	0.001	-0.001	5.465
32	1152.000	0.000	-0.1079D-08	0.8380-02	0.000	-0.000	5.370
33	1188.000	0.000	-0.6490D-09	0.8970-02	-0.000	-0.000	5.276
34	1224.000	0.000	-0.2799D-09	0.5920-02	-0.000	-0.000	4.933
35	1260.000	-0.000	-0.6349D-10	0.2810-02	-0.000	0.000	4.589
36	1296.000	-0.000	0.2626D-10	0.8110-03	-0.000	0.000	4.245
37	1332.000	-0.000	0.4372D-10	-0.1060-03	-0.000	0.000	3.902
38	1368.000	-0.000	0.3253D-10	-0.3460-03	-0.000	0.000	3.558
39	1404.000	-0.000	0.1683D-10	-0.2870-03	0.000	0.000	3.215
40	1440.000	0.000	0.5734D-11	-0.1600-03	0.000	-0.000	2.871
41	1476.000	0.000	0.2576D-12	-0.6070-04	0.000	-0.000	2.528
42	1512.000	0.000	-0.1440D-11	-0.7770-05	0.000	-0.000	2.184
43	1548.000	0.000	-0.1366D-11	0.1070-04	0.000	-0.000	1.840
44	1584.000	0.000	-0.8055D-12	0.1190-04	-0.000	-0.000	1.497
45	1620.000	-0.000	-0.3253D-12	0.7490-05	-0.000	0.000	1.153
46	1656.000	-0.000	-0.5870D-13	0.3270-05	-0.000	0.000	0.810
47	1692.000	-0.000	0.4347D-13	0.8530-06	-0.000	0.000	0.466
48	1728.000	-0.000	0.6499D-13	0.1480-07	-0.000	0.000	0.061
49	1764.000	-0.000	0.6536D-13	-0.8190-19	-0.000	0.000	-0.000

50	1800.000	0.000	0.6536D-13	-0.674D-19	0.000	0.0	-0.000
51	1836.000	0.000	0.6536D-13	-0.550D-19	0.000	0.0	-0.000
52	1872.000	0.000	0.6536D-13	-0.414D-19	0.000	0.0	-0.000
53	1908.000	0.000	0.6536D-13	-0.3[illegible]-19	0.000	0.0	-0.000
54	1944.000	0.000	0.6536D-13	-0.226D-19	0.000	0.0	-0.000
55	1980.000	0.000	0.6536D-13	-0.145D-19	0.000	0.0	-0.000
56	2016.000	0.000	0.6536D-13	-0.127D-19	0.000	0.0	-0.000
57	2052.000	0.000	0.6536D-13	-0.179D-19	0.000	0.0	-0.000
58	2088.000	0.000	0.6536D-13	-0.543D-20	0.000	0.0	-0.000
59	2124.000	0.000	0.6536D-13	-0.181D-20	0.000	0.0	-0.000
60	2160.000	0.000	0.6536D-13	-0.181D-20		0.0	-0.000

USER SHOULD NOTE THAT SLOPE LISTED ABOVE IS RELATIVE TO SLOPE AT BOTTOM OF PILE
AND IS NOT TRUE SLOPE RELATIVE TO ORIGINAL PILE DIRECTION

USER SHOULD NOTE THAT BEAMCOLUMN SHEAR LISTED IS THAT DUE TO BOTH LATERAL AND AXIAL EFFECTS
ALSO THAT APPLIED LATERAL LOADING IS TOTAL FOR ONE INCREMENT LENGTH

MOVEMENTS AND REACTIONS STORED FOR STIFFNESS COEFFICIENT DEVELOPMENT USE

DEFLECTIONS	ROTATIONS	MOMENTS	LATERAL SHEAR	AT STATION
0.17882D 00	-0.81455D-03	-0.29259D 04	0.51813D 02	1

USER SHOULD NOTE LATERAL SHEAR ABOVE IS TRUE SHEAR AT STATION.
SHEAR GIVEN IS PERPENDICULAR TO ORIGINAL UNDEFLECTED MEMBER AXIS.

```
ASP JOB NO. = 9107                                  DATE = 76.114

//LEC9011 JOB (00442705002777100TLEC270111),'C.CHERN     ',PRTY=4,CLASS=A,C9107

ELAPSED TIME ON MAIN = 8         = 000.45, START TIME = 18.13.42

DDNAME = SYSMSG                      PRINTED ON RM027PR1, LINES = 000077
DDNAME = FT06F001                    PRINTED ON RM027PR1, LINES = 000428
LINES OUTPUT FOR THIS JOB = 000505

CARDS FROM MAIN FOR THIS JOB = NONE
```

A-4 WAVE AND WIND LOADS

6 0 0 0 R E M O T E B A T C H

UNITED COMPUTING 67. APEX/SL. H.0.25

09.54.06. 04/27/76.

```
JJJJJJJJJJJJ  VV          VV  JJJJJJJJJJJJ    00000000    CCCCCCCCCC    MM         MM  EEEEEEEEEEEE
JJJJJJJJJJJJ  VV          VV  JJJJJJJJJJJJ   00      00  CCCCCCCCCCCC   MMM       MMM  EEEEEEEEEEEE
      JJ      VV          VV        JJ      00        00 CC        CC   MMMM     MMMM  EE
      JJ      VV          VV        JJ      00        00 CC             MM MM   MM MM  EE
      JJ      VV          VV        JJ      00        00 CC             MM  MMMM  MM   EE
      JJ      VV          VV        JJ      00        00 CC             MM   MM   MM   EE
      JJ      VVV        VVV        JJ      00        00 CC             MM        MM   EE
      JJ       VVV      VVV         JJ      00        00 CC             MM        MM   EEEEEEEE
      JJ        VVV    VVV          JJ      00        00 CC             MM        MM   EEEEEEEE
      JJ          VVVV              JJ      00        00 CC             MM        MM   EE
      JJ           VV               JJ      00        00 CC             MM        MM   EE
      JJ           VV               JJ      00        00 CC             MM        MM   EE
      JJ           VV               JJ      00        00 CC             MM        MM   EE
JJ    JJ           VV         JJ    JJ      00        00 CC        CC   MM        MM   EE
 JJJJJJJ           VV          JJJJJJJ       00      00  CCCCCCCCCCCC   MM        MM   EEEEEEEEEEEE
  JJJJJ            VV           JJJJJ         00000000    CCCCCCCCCC    MM        MM   EEEEEEEEEEEE
```

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*ADD1457
LOADCN    4
LOAD Y    40  49    89    242                                        GLOB CONC   BOAT LNG
LOAD Y    41  51    89    242                                        GLOB CONC   BOAT LNG
LOAD Y    55  58   242    406                                        GLOB CONC   STAIRS
LOAD Y    56  59   242    406                                        GLOB CONC   STAIRS
LOADCN    5
LOAD Z    61  62          -13                                        GLOB UNIF   ADD DEAD
LOAD Z    62  63          -13                                        GLOB UNIF   ADD DEAD
LOAD Z    63  64          -13                                        GLOB UNIF   ADD DEAD
LOAD Z    64  65          -13                                        GLOB UNIF   ADD DEAD
LOAD Z    65  67          -13                                        GLOB UNIF   ADD DEAD
LOAD Z    67  69          -13                                        GLOB UNIF   ADD DEAD
LOAD Z    69  61          -13                                        GLOB UNIF   ADD DEAD
LOAD Z    61  71    15   -793                                        GLOB CONC   ADD DEAD
LOAD Z    64  72    15   -793                                        GLOB CONC   ADD DEAD
LOAD Z    76  75    15   -793                                        GLOB CONC   ADD DEAD
LOADCN    6
LOAD Z    61  62          -86                                        GLOB UNIF   LIVE LDS
LOAD Z    62  63          -86                                        GLOB UNIF   LIVE LDS
LOAD Z    63  64          -86                                        GLOB UNIF   LIVE LDS
LOAD Z    64  65          -86                                        GLOB UNIF   LIVE LDS
LOAD Z    65  67          -86                                        GLOB UNIF   LIVE LDS
LOAD Z    67  69          -86                                        GLOB UNIF   LIVE LDS
LOAD Z    69  61          -86                                        GLOB UNIF   LIVE LDS
LOAD Z    61  71    15  -4083                                        GLOB CONC   LIVE LDS
LOAD Z    64  72    15  -4083                                        GLOB CONC   LIVE LDS
LOAD Z    76  75    15  -4083                                        GLOB CONC   LIVE LDS
LOCOMB
LOCOMB    7 100.    2 100.    3-100.    4 100.    5                              MAX TENS
LOCOMB    8 100.    1 100.    3 100.    4 100.    5 100.    6                    MAX COMP
*END
          1 SECT
          2 SECT PILING1   TUB 18830 5536600 2768300 2768300   3600 1750
          3 SECT PILING2   TUB 13646 4125028 2062514 2062514   3600 1250
          4 SECT JKTLEG1   TUB  6205 2420592 1210296 1210296   4000  500
          5 SECT JKTLEG2   TUB 12566 5029702 2514851 2514851   4100 1000
          6 SECT BRACES1   TUB  3804  357408  178704  178704   2000  625
          7 SECT BRACES2   TUB  2749  210632  105316  105316   1800  500
          8 SECT BRACES3   TUB  2435  146386   73193   73193   1600  500
          9 SECT BRACES4   TUB  1605   74560   37280   37280   1400  375
         10 SECT BRACES5   TUB  1924   72328   36164   36164   1275  500
         11 SECT BRACES6   TUB  1458   55882   27941   27941   1275  375
         12 SECT BRACES7   TUB   558    5630    2815    2815  6,625  280
         13 SECT WISHBON   PRI  5000 3000000 3000000 3000000   1000          500
         14 SECT SUSTLEG   TUB 13646 4125028 2062514 2062514   3600 1250
         15 SECT W18X50    WFC  1620     125   80200    4020    750  570  1800  358   50
         16 SECT W8X24     WFC   706      34    8250    1620    650  398   793  245   50
         17 SECT W6X15     WFC   456      11    3010     967    600  269   600  235   50
         18 GRUP
         19 GRUP P10 PILING1   3600   1750   2900 1160 3600 1
         20 GRUP P20 PILING2   3600   1250   2900 1160 3600 1
         21 GRUP JL1 JKTLEG1   4000    500   2900 1160 3600 1
         22 GRUP JL2 JKTLEG2   4100   1000   2900 1160 3600 1
         23 GRUP BR1 BRACES1   2000    625   2900 1160 3600 2 483   8    8
         24 GRUP BR2 BRACES2   1800    500   2900 1160 3600 2 342   8    8
         25 GRUP BR3 BRACES3   1600    500   2900 1160 3600 2 342   8    8
```

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26 GRUP BR4 BRACES4    1400    375   2900 1160 3600 2 283  8   8
27 GRUP BR5 BRACES5    1275    500   2900 1160 3600 2 342  8   8
28 GRUP BR6 BRACES6    1275    375   2900 1160 3600 2 342  8   8
29 GRUP BR7 BRACES7   6.625    280   2900 1160 3600 2 318  8   8
30 GRUP WBN WTSHAON                  2900 1160 3600 2                 01
31 GRUP STL SUSTLEG    3600   1250   2900 1160 3600 1
32 GRUP W18 W18X50                   2900 1160 3600 1                 01
33 GRUP W08 W8X24                    2900 1160 3600 1                 01
34 GRUP W06 W6X15                    2900 1160 3600 1                 01
35 MEMBER
36 MEMBER    1   4 P10                                                        F  0000 1
37 MEMBER    4  16 P10                                                        F  0000 1
38 MEMBER   16  28 P20                                                        F  0000 1
39 MEMBER   28  43 P20                                                        F  0000 1
40 MEMBER   43  55 P20                                                        F  0000 1
41 MEMBER    2   5 P10                                                        F  0000 2
42 MEMBER    5  17 P10                                                        F  0000 2
43 MEMBER   17  29 P20                                                        F  0000 2
44 MEMBER   29  44 P20                                                        F  0000 2
45 MEMBER   44  56 P20                                                        F  0000 2
46 MEMBER    3   6 P10                                                        F  0000 3
47 MEMBER    6  18 P10                                                        F  0000 3
48 MEMBER   18  30 P20                                                        F  0000 3
49 MEMBER   30  45 P20                                                        F  0000 3
50 MEMBER   45  57 P20                                                        F  0000 3
51 MEMBER   10  22 JL1                                                        F  4000
52 MEMBER   22  34 JL1                                                        F  4000
53 MEMBER   34  40 JL2                                                        F  4100
54 MEMBER   40  49 JL2                                                        F  4100
55 MEMBER   49  55 JL2                                                        F  4100
56 MEMBER   12  24 JL1                                                        F  4000
57 MEMBER   24  36 JL1                                                        F  4000
58 MEMBER   36  41 JL2                                                        F  4100
59 MEMBER   41  51 JL2                                                        F  4100
60 MEMBER   51  56 JL2                                                        F  4100
61 MEMBER   14  26 JL1                                                        F  4000
62 MEMBER   26  38 JL1                                                        F  4000
63 MEMBER   38  42 JL2                                                        F  4100
64 MEMBER   42  53 JL2                                                        F  4100
65 MEMBER   53  57 JL2                                                        F  4100
66 MEMBER   10  11 BR2                                                           1800
67 MEMBER   11  12 BR2                                                           1800
68 MEMBER   12  13 BR2                                                           1800
69 MEMBER   13  14 BR2                                                           1800
70 MEMBER   14  15 BR2                                                           1800
71 MEMBER   15  10 BR2                                                           1800
72 MEMBER   11  13 BR4                                                           1400
73 MEMBER   13  15 BR4                                                           1400
74 MEMBER   15  11 BR4                                                           1400
75 MEMBER   22  23 BR2                                                           1800
76 MEMBER   23  24 BR2                                                           1800
77 MEMBER   24  25 BR2                                                           1800
78 MEMBER   25  26 BR2                                                           1800
79 MEMBER   26  27 BR2                                                           1800
80 MEMBER   27  22 BR2                                                           1800
81 MEMBER   23  25 BR4                                                           1400
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82	MEMBER	25	27	BR4			1400
83	MEMBER	27	23	BR4			1400
84	MEMBER	34	35	BR5			1275
85	MEMBER	35	36	BR5			1275
86	MEMBER	36	37	BR5			1275
87	MEMBER	37	38	BR5			1275
88	MEMBER	38	39	BR5			1275
89	MEMBER	39	34	BR5			1275
90	MEMBER	35	37	BR6			1275
91	MEMBER	37	39	BR6			1275
92	MEMBER	39	35	BR6			1275
93	MEMBER	49	50	BR3			1600
94	MEMBER	50	51	BR3			1600
95	MEMBER	51	52	BR3			1600
96	MEMBER	52	53	BR3			1600
97	MEMBER	53	54	BR3			1600
98	MEMBER	54	49	BR3			1600
99	MEMBER	50	52	BR5			1275
100	MEMBER	52	54	BR5			1275
101	MEMBER	54	50	BR5			1275
102	MEMBER	11	22	BR3			1600
103	MEMBER	11	24	BR3			1600
104	MEMBER	13	24	BR3			1600
105	MEMBER	13	26	BR3			1600
106	MEMBER	15	26	BR3			1600
107	MEMBER	15	22	BR3			1600
108	MEMBER	22	36	BR1			2000
109	MEMBER	24	38	BR1			2000
110	MEMBER	26	34	BR1			2000
111	MEMBER	36	49	BR1			2000
112	MEMBER	38	51	BR1			2000
113	MEMBER	34	53	BR1			2000
114	MEMBER	4	7	WBN	1111	F	0000
115	MEMBER	7	10	WBN		F	0000
116	MEMBER	5	8	WBN	1111	F	0000
117	MEMBER	8	12	WBN		F	0000
118	MEMBER	6	9	WBN	1111	F	0000
119	MEMBER	9	14	WBN		F	0000
120	MEMBER	16	19	WBN	1111	F	0000
121	MEMBER	19	22	WBN		F	0000
122	MEMBER	17	20	WBN	1111	F	0000
123	MEMBER	20	24	WBN		F	0000
124	MEMBER	18	21	WBN	1111	F	0000
125	MEMBER	21	26	WBN		F	0000
126	MEMBER	28	31	WBN	1111	F	0000
127	MEMBER	31	34	WBN		F	0000
128	MEMBER	29	32	WBN	1111	F	0000
129	MEMBER	32	36	WBN		F	0000
130	MEMBER	30	33	WBN	1111	F	0000
131	MEMBER	33	38	WBN		F	0000
132	MEMBER	43	45	WBN	1111	F	0000
133	MEMBER	46	49	WBN		F	0000
134	MEMBER	44	47	WBN	1111	F	0000
135	MEMBER	47	51	WBN		F	0000
136	MEMBER	45	48	WBN	1111	F	0000
137	MEMBER	48	53	WBN		F	0000

138	MEMBER	55	58	STL					3600
139	MEMBER	58	61	STL					3600
140	MEMBER	61	71	STL					3600
141	MEMBER	56	59	STL					3600
142	MEMBER	59	64	STL					3600
143	MEMBER	64	72	STL					3600
144	MEMBER	57	60	STL					3600
145	MEMBER	60	70	STL					3600
146	MEMBER	70	67	STL					3600
147	MEMBER	67	76	STL					3600
148	MEMBER	76	75	STL					3600
149	MEMBER	58	59	BR5					1275
150	MEMBER	59	60	BR5					1275
151	MEMBER	60	58	BR5					1275
152	MEMBER	59	61	BR5					1275
153	MEMBER	60	64	BR5					1275
154	MEMBER	58	67	BR5					1275
155	MEMBER	70	66	BR7					6.625
156	MEMBER	70	68	BR7					6.625
157	MEMBER	76	77	BR6					1275
158	MEMBER	76	78	BR6					1275
159	MEMBER	61	62	W18					0000
160	MEMBER	62	63	W18					0000
161	MEMBER	63	64	W18					0000
162	MEMBER	64	65	W18					0000
163	MEMBER	65	67	W18					0000
164	MEMBER	67	69	W18					0000
165	MEMBER	69	61	W18					0000
166	MEMBER	63	65	W08					0000
167	MEMBER	65	66	W08					0000
168	MEMBER	66	67	W08					0000
169	MEMBER	67	68	W08					0000
170	MEMBER	68	69	W08					0000
171	MEMBER	69	62	W08					0000
172	MEMBER	71	73	W18					0000
173	MEMBER	71	72	W18					0000
174	MEMBER	72	74	W18					0000
175	MEMBER	71	81	W18					0000
176	MEMBER	71	77	W18					0000
177	MEMBER	77	83	W18					0000
178	MEMBER	72	82	W18					0000
179	MEMBER	72	78	W18					0000
180	MEMBER	78	84	W18					0000
181	MEMBER	77	79	W18					0000
182	MEMBER	77	75	W18					0000
183	MEMBER	75	78	W18					0000
184	MEMBER	78	80	W18					0000
185	MEMBER	71	75	W06					0000
186	MEMBER	72	75	W06					0000
187	JOINT								
188	JOINT	1	2987	-1725	-600	111	PILING A		
189	JOINT	2	-2987	-1725	-600	111	PILING B		
190	JOINT	3	000	3449	-600	111	PILING C		
191	JOINT	4	2910	-1684	0		MUDLINE		
192	JOINT	5	-2910	-1684	0		MUDLINE		
193	JOINT	6	0	3359	0		MUDLINE		

194	JOINT	7	2900	-1924	0	MIDLINE
195	JOINT	8	-2900	-1924	0	MIDLINE
196	JOINT	9	0	3599	0	MIDLINE
197	JOINT	10	2900	-1674	0	MIDLINE
198	JOINT	11	0	-1674	0	MIDLINE
199	JOINT	12	-29	-1674	0	MIDLINE
200	JOINT	13	-1450	837	0	MIDLINE
201	JOINT	14	0	3349	0	MIDLINE
202	JOINT	15	1450	837	0	MIDLINE
203	JOINT	16	2447	-1417	3200	1 LEVEL
204	JOINT	17	-2447	-1417	3200	1 LEVEL
205	JOINT	18	0	2825	3200	1 LEVEL
206	JOINT	19	2438	-1657	3200	1 LEVEL
207	JOINT	20	-2438	-1657	3200	1 LEVEL
208	JOINT	21	0	3065	3200	1 LEVEL
209	JOINT	22	2438	-1407	3200	1 LEVEL
210	JOINT	23	0	-1407	3200	1 LEVEL
211	JOINT	24	-2438	-1407	3200	1 LEVEL
212	JOINT	25	-1219	704	3200	1 LEVEL
213	JOINT	26	0	2815	3200	1 LEVEL
214	JOINT	27	1219	704	3200	1 LEVEL
215	JOINT	28	1987	-1151	6400	2 LEVEL
216	JOINT	29	-1987	-1151	6400	2 LEVEL
217	JOINT	30	0	3437	6400	2 LEVEL
218	JOINT	31	1977	-1391	6400	2 LEVEL
219	JOINT	32	-1977	-1391	6400	2 LEVEL
220	JOINT	33	0	3677	6400	2 LEVEL
221	JOINT	34	1977	-1141	6400	2 LEVEL
222	JOINT	35	0	-1141	6400	2 LEVEL
223	JOINT	36	-1977	-1141	6400	2 LEVEL
224	JOINT	37	-988	571	6400	2 LEVEL
225	JOINT	38	0	3427	6400	2 LEVEL
226	JOINT	39	988	571	6400	2 LEVEL
227	JOINT	40	1774	-1040	7800	BOAT LOG
228	JOINT	41	-1774	-1040	7800	BOAT LOG
229	JOINT	42	0	2880	7800	BOAT LOG
230	JOINT	43	1525	-885	9600	3 LEVEL
231	JOINT	44	-1525	-885	9600	3 LEVEL
232	JOINT	45	0	1759	9600	3 LEVEL
233	JOINT	46	1515	-1125	9600	3 LEVEL
234	JOINT	47	-1515	-1125	9600	3 LEVEL
235	JOINT	48	0	1999	9600	3 LEVEL
236	JOINT	49	1515	-875	9600	3 LEVEL
237	JOINT	50	0	-875	9600	3 LEVEL
238	JOINT	51	-1515	-875	9600	3 LEVEL
239	JOINT	52	-757	437	9600	3 LEVEL
240	JOINT	53	0	1749	9600	3 LEVEL
241	JOINT	54	757	437	9600	3 LEVEL
242	JOINT	55	1450	-837	10050	[illegible]P LEVEL
243	JOINT	56	-1450	-837	10050	[illegible]P LEVEL
244	JOINT	57	0	1674	10050	[illegible]P LEVEL
245	JOINT	58	1450	-837	12900	ST BRACE
246	JOINT	59	-1450	-837	12900	ST BRACE
247	JOINT	60	0	1674	12900	ST BRACE
248	JOINT	61	1450	-837	14400	FOT DECK
249	JOINT	62	1000	-837	14400	FOT DECK

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250 JOINT   63   -1000   -837  14400                                  FOT DECK
251 JOINT   64   -1450   -837  14400                                  FOT DECK
252 JOINT   65   -1000   -837  14400                                  FOT DECK
253 JOINT   66   -1000   1674  14400                                  FOT DECK
254 JOINT   67       0   1674  14400                                  FOT DECK
255 JOINT   68    1000   1674  14400                                  FOT DECK
256 JOINT   69    1000   -837  14400                                  FOT DECK
257 JOINT   70       0   1674  13500                                  BRACE PT
258 JOINT   71    1450   -837  15900                                  TOP DECK
259 JOINT   72   -1450   -837  15900                                  TOP DECK
260 JOINT   73    1750   -837  15900                                  TOP DECK
261 JOINT   74   -1750   -837  15900                                  TOP DECK
262 JOINT   75       0   1674  15900                                  TOP DECK
263 JOINT   76       0   1674  14800                                  BRACE PT
264 JOINT   77    1450   1674  15900                                  TOP DECK
265 JOINT   78   -1450   1674  15900                                  TOP DECK
266 JOINT   79    1750   1674  15900                                  TOP DECK
267 JOINT   80   -1750   1674  15900                                  TOP DECK
268 JOINT   81    1450  -1337  15900                                  TOP DECK
269 JOINT   82   -1450  -1337  15900                                  TOP DECK
270 JOINT   83    1450   2174  15900                                  TOP DECK
271 JOINT   84   -1450   2174  15900                                  TOP DECK
272 LOAD
273 LOADCN   1
274 LOAD Y  43  55    4.08    345                                     GLOB CONC   WN 1 1
275 LOAD X  43  55                                     4.08-244106 GLOB MOMT   WN 1 1
276 LOAD Y  44  56    4.08    345                                     GLOB CONC   WN 1 1
277 LOAD X  44  56                                     4.08-244106 GLOB MOMT   WN 1 1
278 LOAD Y  45  57    4.07    345                                     GLOB CONC   WN 1 1
279 LOAD X  45  57                                     4.07-244106 GLOB MOMT   WN 1 1
280 LOAD Y  43  55    4.08   1111                                     GLOB CONC   WN 2 1
281 LOAD X  43  55                                     4.08-653247 GLOB MOMT   WN 2 1
282 LOAD Y  44  56    4.08   1111                                     GLOB CONC   WN 2 1
283 LOAD X  44  56                                     4.08-653247 GLOB MOMT   WN 2 1
284 LOAD Y  45  57    4.07   1111                                     GLOB CONC   WN 2 1
285 LOAD X  45  57                                     4.07-653247 GLOB MOMT   WN 2 1
286 LOAD X  10  22    0.00      1  10.81     1                        GLOB UNIF   WV 0 1
287 LOAD Y  10  22    0.00     47  10.81    48                        GLOB UNIF   WV 0 1
288 LOAD Z  10  22    0.00-    04  10.81-   04                        GLOB UNIF   WV 0 1
289 LOAD X  10  22   10.81      1  10.81     1                        GLOB UNIF   WV 0 1
290 LOAD Y  10  22   10.81     48  10.81    50                        GLOB UNIF   WV 0 1
291 LOAD Z  10  22   10.81-    04  10.81-   04                        GLOB UNIF   WV 0 1
292 LOAD X  10  22   21.63      1  10.81     1                        GLOB UNIF   WV 0 1
293 LOAD Y  10  22   21.63     50  10.81    53                        GLOB UNIF   WV 0 1
294 LOAD Z  10  22   21.63-    04  10.81-   04                        GLOB UNIF   WV 0 1
295 LOAD X  22  34    0.00      1  10.81     1                        GLOB UNIF   WV 0 1
296 LOAD Y  22  34    0.00     53  10.81    57                        GLOB UNIF   WV 0 1
297 LOAD Z  22  34    0.00-    04  10.81-   05                        GLOB UNIF   WV 0 1
298 LOAD X  22  34   10.81      1  10.81     1                        GLOB UNIF   WV 0 1
299 LOAD Y  22  34   10.81     57  10.81    64                        GLOB UNIF   WV 0 1
300 LOAD Z  22  34   10.81-    05  10.81-   05                        GLOB UNIF   WV 0 1
301 LOAD X  22  34   21.63      1  10.81     1                        GLOB UNIF   WV 0 1
302 LOAD Y  22  34   21.63     64  10.81    71                        GLOB UNIF   WV 0 1
303 LOAD Z  22  34   21.63-    05  10.81-   06                        GLOB UNIF   WV 0 1
304 LOAD X  34  40    0.00      1   4.73     1                        GLOB UNIF   WV 0 1
305 LOAD Y  34  40    0.00     73   4.73    77                        GLOB UNIF   WV 0 1
```

306	LOAD	Z	34	40	0.00-	05	4.73-	05	GLOB	UNIF	WV	0	1
307	LOAD	X	34	40	4.73	1	4.73	1	GLOB	UNIF	WV	0	1
308	LOAD	Y	34	40	4.73	77	4.73	82	GLOB	UNIF	WV	0	1
309	LOAD	Z	34	40	4.73-	05	4.73-	06	GLOB	UNIF	WV	0	1
310	LOAD	X	34	40	9.45	1	4.73	1	GLOB	UNIF	WV	0	1
311	LOAD	Y	34	40	9.45	82	4.73	88	GLOB	UNIF	WV	0	1
312	LOAD	Z	34	40	9.45-	06	4.73-	06	GLOB	UNIF	WV	0	1
313	LOAD	X	40	49	0.00	1	6.09	1	GLOB	UNIF	WV	0	1
314	LOAD	Y	40	49	0.00	88	6.09	96	GLOB	UNIF	WV	0	1
315	LOAD	Z	40	49	0.00-	08	6.09-	09	GLOB	UNIF	WV	0	1
316	LOAD	X	40	49	6.09	1	6.09	1	GLOB	UNIF	WV	0	1
317	LOAD	Y	40	49	6.09	96	6.09	106	GLOB	UNIF	WV	0	1
318	LOAD	Z	40	49	6.09-	09	6.09-	09	GLOB	UNIF	WV	0	1
319	LOAD	X	40	49	12.17	1	6.09	1	GLOB	UNIF	WV	0	1
320	LOAD	Y	40	49	12.17	106	6.09	118	GLOB	UNIF	WV	0	1
321	LOAD	Z	40	49	12.17-	09	6.09-	11	GLOB	UNIF	WV	0	1
322	LOAD	X	49	55	0.00	1	1.52	1	GLOB	UNIF	WV	0	1
323	LOAD	Y	49	55	0.00	118	1.52	121	GLOB	UNIF	WV	0	1
324	LOAD	Z	49	55	0.00-	10	1.52-	10	GLOB	UNIF	WV	0	1
325	LOAD	X	49	55	1.52	1	1.52	1	GLOB	UNIF	WV	0	1
326	LOAD	Y	49	55	1.52	121	1.52	125	GLOB	UNIF	WV	0	1
327	LOAD	Z	49	55	1.52-	10	1.52-	10	GLOB	UNIF	WV	0	1
328	LOAD	X	49	55	3.04	1	1.52	1	GLOB	UNIF	WV	0	1
329	LOAD	Y	49	55	3.04	125	1.52	128	GLOB	UNIF	WV	0	1
330	LOAD	Z	49	55	3.04-	10	1.52-	11	GLOB	UNIF	WV	0	1
331	LOAD	X	12	24	0.00-	1	10.81-	1	GLOB	UNIF	WV	0	1
332	LOAD	Y	12	24	0.00	47	10.81	48	GLOB	UNIF	WV	0	1
333	LOAD	Z	12	24	0.00-	04	10.81-	04	GLOB	UNIF	WV	0	1
334	LOAD	X	12	24	10.81-	1	10.81-	1	GLOB	UNIF	WV	0	1
335	LOAD	Y	12	24	10.81	48	10.81	50	GLOB	UNIF	WV	0	1
336	LOAD	Z	12	24	10.81-	04	10.81-	04	GLOB	UNIF	WV	0	1
337	LOAD	X	12	24	21.63-	1	10.81-	1	GLOB	UNIF	WV	0	1
338	LOAD	Y	12	24	21.63	50	10.81	53	GLOB	UNIF	WV	0	1
339	LOAD	Z	12	24	21.63-	04	10.81-	04	GLOB	UNIF	WV	0	1
340	LOAD	X	24	36	0.00-	1	10.81-	1	GLOB	UNIF	WV	0	1
341	LOAD	Y	24	36	0.00	53	10.81	57	GLOB	UNIF	WV	0	1
342	LOAD	Z	24	36	0.00-	04	10.81-	05	GLOB	UNIF	WV	0	1
343	LOAD	X	24	36	10.81-	1	10.81-	1	GLOB	UNIF	WV	0	1
344	LOAD	Y	24	36	10.81	57	10.81	64	GLOB	UNIF	WV	0	1
345	LOAD	Z	24	36	10.81-	05	10.81-	05	GLOB	UNIF	WV	0	1
346	LOAD	X	24	36	21.63-	1	10.81-	1	GLOB	UNIF	WV	0	1
347	LOAD	Y	24	36	21.63	64	10.81	71	GLOB	UNIF	WV	0	1
348	LOAD	Z	24	36	21.63-	05	10.81-	06	GLOB	UNIF	WV	0	1
349	LOAD	X	36	41	0.00-	1	4.73-	1	GLOB	UNIF	WV	0	1
350	LOAD	Y	36	41	0.00	73	4.73	77	GLOB	UNIF	WV	0	1
351	LOAD	Z	36	41	0.00-	05	4.73-	05	GLOB	UNIF	WV	0	1
352	LOAD	X	36	41	4.73-	1	4.73-	1	GLOB	UNIF	WV	0	1
353	LOAD	Y	36	41	4.73	77	4.73	82	GLOB	UNIF	WV	0	1
354	LOAD	Z	36	41	4.73-	05	4.73-	06	GLOB	UNIF	WV	0	1
355	LOAD	X	36	41	9.45-	1	4.73-	1	GLOB	UNIF	WV	0	1
356	LOAD	Y	36	41	9.45	82	4.73	88	GLOB	UNIF	WV	0	1
357	LOAD	Z	36	41	9.45-	06	4.73-	06	GLOB	UNIF	WV	0	1
358	LOAD	X	41	51	0.00-	1	6.09-	1	GLOB	UNIF	WV	0	1
359	LOAD	Y	41	51	0.00	88	6.09	96	GLOB	UNIF	WV	0	1
360	LOAD	Z	41	51	0.00-	08	6.09-	09	GLOB	UNIF	WV	0	1
361	LOAD	X	41	51	6.09-	1	6.09-	1	GLOB	UNIF	WV	0	1

362	LOAD	Y	41	51	6.09	96	6.09	106	GLOB	UNIF	WV	0	1
363	LOAD	Z	41	51	6.09-	09	6.09-	09	GLOB	UNIF	WV	0	1
364	LOAD	X	41	51	12.17-	1	6.09-	1	GLOB	UNIF	WV	0	1
365	LOAD	Y	41	51	12.17	106	6.09	118	GLOB	UNIF	WV	0	1
366	LOAD	Z	41	51	12.17-	09	6.09-	11	GLOB	UNIF	WV	0	1
367	LOAD	X	51	56	0.00-	1	1.52-	1	GLOB	UNIF	WV	0	1
368	LOAD	Y	51	56	0.00	118	1.52	121	GLOB	UNIF	WV	0	1
369	LOAD	Z	51	56	0.00-	10	1.52-	10	GLOB	UNIF	WV	0	1
370	LOAD	X	51	56	1.52-	1	1.52-	1	GLOB	UNIF	WV	0	1
371	LOAD	Y	51	56	1.52	121	1.52	125	GLOB	UNIF	WV	0	1
372	LOAD	Z	51	56	1.52-	10	1.52-	10	GLOB	UNIF	WV	0	1
373	LOAD	X	51	56	3.04-	1	1.52-	1	GLOB	UNIF	WV	0	1
374	LOAD	Y	51	56	3.04	125	1.52	128	GLOB	UNIF	WV	0	1
375	LOAD	Z	51	56	3.04-	10	1.52-	11	GLOB	UNIF	WV	0	1
376	LOAD	Y	14	26	0.00	50	10.81	51	GLOB	UNIF	WV	0	1
377	LOAD	Z	14	26	0.00	08	10.81	08	GLOB	UNIF	WV	0	1
378	LOAD	Y	14	26	10.81	51	10.81	53	GLOB	UNIF	WV	0	1
379	LOAD	Z	14	26	10.81	08	10.81	09	GLOB	UNIF	WV	0	1
380	LOAD	Y	14	26	21.63	53	10.81	56	GLOB	UNIF	WV	0	1
381	LOAD	Z	14	26	21.63	09	10.81	09	GLOB	UNIF	WV	0	1
382	LOAD	Y	26	38	0.00	55	10.86	59	GLOB	UNIF	WV	0	1
383	LOAD	Z	26	38	0.00-	11	10.86-	11	GLOB	UNIF	WV	0	1
384	LOAD	Y	26	38	10.86	59	10.86	64	GLOB	UNIF	WV	0	1
385	LOAD	Z	26	38	10.86-	11	10.86-	12	GLOB	UNIF	WV	0	1
386	LOAD	Y	26	38	21.72	64	10.86	70	GLOB	UNIF	WV	0	1
387	LOAD	Z	26	38	21.72-	12	10.86-	13	GLOB	UNIF	WV	0	1
388	LOAD	Y	38	42	0.00	65	5.01	69	GLOB	UNIF	WV	0	1
389	LOAD	Z	38	42	0.00	25	5.01	27	GLOB	UNIF	WV	0	1
390	LOAD	Y	38	42	5.01	69	5.01	73	GLOB	UNIF	WV	0	1
391	LOAD	Z	38	42	5.01	27	5.01	29	GLOB	UNIF	WV	0	1
392	LOAD	Y	38	42	10.02	73	5.01	78	GLOB	UNIF	WV	0	1
393	LOAD	Z	38	42	10.02	29	5.01	31	GLOB	UNIF	WV	0	1
394	LOAD	Y	42	53	0.00	65	7.09	71	GLOB	UNIF	WV	0	1
395	LOAD	Z	42	53	0.00	41	7.09	45	GLOB	UNIF	WV	0	1
396	LOAD	Y	42	53	7.09	71	7.09	79	GLOB	UNIF	WV	0	1
397	LOAD	Z	42	53	7.09	45	7.09	49	GLOB	UNIF	WV	0	1
398	LOAD	Y	42	53	14.17	79	7.09	88	GLOB	UNIF	WV	0	1
399	LOAD	Z	42	53	14.17	49	7.09	55	GLOB	UNIF	WV	0	1
400	LOAD	Y	53	57	0.00	120	1.52	123	GLOB	UNIF	WV	0	1
401	LOAD	Z	53	57	0.00	20	1.52	20	GLOB	UNIF	WV	0	1
402	LOAD	Y	53	57	1.52	123	1.52	126	GLOB	UNIF	WV	0	1
403	LOAD	Z	53	57	1.52	20	1.52	21	GLOB	UNIF	WV	0	1
404	LOAD	Y	53	57	3.04	126	1.52	129	GLOB	UNIF	WV	0	1
405	LOAD	Z	53	57	3.04	21	1.52	21	GLOB	UNIF	WV	0	1
406	LOAD	Y	10	11	0.00	21	9.67	21	GLOB	UNIF	WV	0	1
407	LOAD	Y	10	11	9.67	21	9.67	21	GLOB	UNIF	WV	0	1
408	LOAD	Y	10	11	19.33	21	9.67	21	GLOB	UNIF	WV	0	1
409	LOAD	Y	11	12	0.00	21	9.67	21	GLOB	UNIF	WV	0	1
410	LOAD	Y	11	12	9.67	21	9.67	21	GLOB	UNIF	WV	0	1
411	LOAD	Y	11	12	19.33	21	9.67	21	GLOB	UNIF	WV	0	1
412	LOAD	X	12	13	0.00-	09	9.67-	09	GLOB	UNIF	WV	0	1
413	LOAD	Y	12	13	0.00	05	9.67	05	GLOB	UNIF	WV	0	1
414	LOAD	X	12	13	9.67-	09	9.67-	10	GLOB	UNIF	WV	0	1
415	LOAD	Y	12	13	9.67	05	9.67	06	GLOB	UNIF	WV	0	1
416	LOAD	X	12	13	19.33-	10	9.67-	10	GLOB	UNIF	WV	0	1
417	LOAD	Y	12	13	19.33	06	9.67	06	GLOB	UNIF	WV	0	1

418	LOAD	X	13	14	0.00-	10	9.67-	10	GLOB UNIF	WV	0	1
419	LOAD	Y	13	14	0.00	06	9.67	06	GLOB UNIF	WV	0	1
420	LOAD	X	13	14	9.67-	10	9.67-	10	GLOB UNIF	WV	0	1
421	LOAD	Y	13	14	9.67	06	9.67	06	GLOB UNIF	WV	0	1
422	LOAD	X	13	14	19.34-	10	9.67-	10	GLOB UNIF	WV	0	1
423	LOAD	Y	13	14	19.34	06	9.67	06	GLOB UNIF	WV	0	1
424	LOAD	X	14	15	0.00	10	9.67	10	GLOB UNIF	WV	0	1
425	LOAD	Y	14	15	0.00	06	9.67	06	GLOB UNIF	WV	0	1
426	LOAD	X	14	15	9.67	10	9.67	10	GLOB UNIF	WV	0	1
427	LOAD	Y	14	15	9.67	06	9.67	06	GLOB UNIF	WV	0	1
428	LOAD	X	14	15	19.34	10	9.67	10	GLOB UNIF	WV	0	1
429	LOAD	Y	14	15	19.34	06	9.67	06	GLOB UNIF	WV	0	1
430	LOAD	X	15	10	0.00	10	9.67	10	GLOB UNIF	WV	0	1
431	LOAD	Y	15	10	0.00	06	9.67	06	GLOB UNIF	WV	0	1
432	LOAD	X	15	10	9.67	10	9.67	09	GLOB UNIF	WV	0	1
433	LOAD	Y	15	10	9.67	06	9.67	05	GLOB UNIF	WV	0	1
434	LOAD	X	15	10	19.33	09	9.67	09	GLOB UNIF	WV	0	1
435	LOAD	Y	15	10	19.33	05	9.67	05	GLOB UNIF	WV	0	1
436	LOAD	X	11	13	0.00	07	9.67	07	GLOB UNIF	WV	0	1
437	LOAD	Y	11	13	0.00	04	9.67	04	GLOB UNIF	WV	0	1
438	LOAD	X	11	13	9.67	07	9.67	08	GLOB UNIF	WV	0	1
439	LOAD	Y	11	13	9.67	04	9.67	04	GLOB UNIF	WV	0	1
440	LOAD	X	11	13	19.33	08	9.67	08	GLOB UNIF	WV	0	1
441	LOAD	Y	11	13	19.33	04	9.67	04	GLOB UNIF	WV	0	1
442	LOAD	Y	13	15	0.00	18	9.67	18	GLOB UNIF	WV	0	1
443	LOAD	Y	13	15	9.67	18	9.67	18	GLOB UNIF	WV	0	1
444	LOAD	Y	13	15	19.33	18	9.67	18	GLOB UNIF	WV	0	1
445	LOAD	X	15	11	0.00-	08	9.67-	08	GLOB UNIF	WV	0	1
446	LOAD	Y	15	11	0.00	04	9.67	04	GLOB UNIF	WV	0	1
447	LOAD	X	15	11	9.67-	08	9.67-	07	GLOB UNIF	WV	0	1
448	LOAD	Y	15	11	9.67	04	9.67	04	GLOB UNIF	WV	0	1
449	LOAD	X	15	11	19.33-	07	9.67-	07	GLOB UNIF	WV	0	1
450	LOAD	Y	15	11	19.33	04	9.67	04	GLOB UNIF	WV	0	1
451	LOAD	Y	22	23	0.00	24	8.13	24	GLOB UNIF	WV	0	1
452	LOAD	Y	22	23	8.13	24	8.13	24	GLOB UNIF	WV	0	1
453	LOAD	Y	22	23	16.25	24	8.13	24	GLOB UNIF	WV	0	1
454	LOAD	Y	23	24	0.00	24	8.13	24	GLOB UNIF	WV	0	1
455	LOAD	Y	23	24	8.13	24	8.13	24	GLOB UNIF	WV	0	1
456	LOAD	Y	23	24	16.25	24	8.13	24	GLOB UNIF	WV	0	1
457	LOAD	X	24	25	0.00-	10	8.13-	11	GLOB UNIF	WV	0	1
458	LOAD	Y	24	25	0.00	06	8.13	06	GLOB UNIF	WV	0	1
459	LOAD	X	24	25	8.13-	11	8.13-	11	GLOB UNIF	WV	0	1
460	LOAD	Y	24	25	8.13	06	8.13	06	GLOB UNIF	WV	0	1
461	LOAD	X	24	25	16.25-	11	8.13-	11	GLOB UNIF	WV	0	1
462	LOAD	Y	24	25	16.25	06	8.13	06	GLOB UNIF	WV	0	1
463	LOAD	X	25	26	0.00-	11	8.13-	11	GLOB UNIF	WV	0	1
464	LOAD	Y	25	26	0.00	06	8.13	06	GLOB UNIF	WV	0	1
465	LOAD	X	25	26	8.13-	11	8.13-	11	GLOB UNIF	WV	0	1
466	LOAD	Y	25	26	8.13	06	8.13	06	GLOB UNIF	WV	0	1
467	LOAD	X	25	26	16.25-	11	8.13-	11	GLOB UNIF	WV	0	1
468	LOAD	Y	25	26	16.25	06	8.13	06	GLOB UNIF	WV	0	1
469	LOAD	X	26	27	0.00	11	8.13	11	GLOB UNIF	WV	0	1
470	LOAD	Y	26	27	0.00	06	8.13	06	GLOB UNIF	WV	0	1
471	LOAD	X	26	27	8.13	11	8.13	11	GLOB UNIF	WV	0	1
472	LOAD	Y	26	27	8.13	06	8.13	06	GLOB UNIF	WV	0	1
473	LOAD	X	26	27	16.25	11	8.13	11	GLOB UNIF	WV	0	1

474	LOAD	Y	26	27	16.25	06	8.13	06	GLOB	UNIF	WV	0	1
475	LOAD	X	27	22	0.00	11	8.13	11	GLOB	UNIF	WV	0	1
476	LOAD	Y	27	22	0.00	06	8.13	06	GLOB	UNIF	WV	0	1
477	LOAD	X	27	22	8.13	11	8.13	11	GLOB	UNIF	WV	0	1
478	LOAD	Y	27	22	8.13	06	8.13	06	GLOB	UNIF	WV	0	1
479	LOAD	X	27	22	16.25	11	8.13	11	GLOB	UNIF	WV	0	1
480	LOAD	Y	27	22	16.25	06	8.13	06	GLOB	UNIF	WV	0	1
481	LOAD	X	23	25	0.00	08	8.13	08	GLOB	UNIF	WV	0	1
482	LOAD	Y	23	25	0.00	05	8.13	05	GLOB	UNIF	WV	0	1
483	LOAD	X	23	25	8.13	08	8.13	08	GLOB	UNIF	WV	0	1
484	LOAD	Y	23	25	8.13	05	8.13	05	GLOB	UNIF	WV	0	1
485	LOAD	X	23	25	16.25	09	8.13	09	GLOB	UNIF	WV	0	1
486	LOAD	Y	23	25	16.25	05	8.13	05	GLOB	UNIF	WV	0	1
487	LOAD	Y	25	27	0.00	20	8.13	20	GLOB	UNIF	WV	0	1
488	LOAD	Y	25	27	8.13	20	8.13	20	GLOB	UNIF	WV	0	1
489	LOAD	Y	25	27	16.25	20	8.13	20	GLOB	UNIF	WV	0	1
490	LOAD	X	27	23	0.00*	09	8.13*	09	GLOB	UNIF	WV	0	1
491	LOAD	Y	27	23	0.00	05	8.13	05	GLOB	UNIF	WV	0	1
492	LOAD	X	27	23	8.13*	09	8.13*	08	GLOB	UNIF	WV	0	1
493	LOAD	Y	27	23	8.13	05	8.13	05	GLOB	UNIF	WV	0	1
494	LOAD	X	27	23	16.25*	08	8.13*	08	GLOB	UNIF	WV	0	1
495	LOAD	Y	27	23	16.25	05	8.13	05	GLOB	UNIF	WV	0	1
496	LOAD	Y	34	35	0.00	23	6.59	23	GLOB	UNIF	WV	0	1
497	LOAD	Y	34	35	6.59	23	6.59	23	GLOB	UNIF	WV	0	1
498	LOAD	Y	34	35	13.18	23	6.59	23	GLOB	UNIF	WV	0	1
499	LOAD	Y	35	36	0.00	23	6.59	23	GLOB	UNIF	WV	0	1
500	LOAD	Y	35	36	6.59	23	6.59	23	GLOB	UNIF	WV	0	1
501	LOAD	Y	35	36	13.18	23	6.59	23	GLOB	UNIF	WV	0	1
502	LOAD	X	36	37	0.00*	10	6.59*	10	GLOB	UNIF	WV	0	1
503	LOAD	Y	36	37	0.00	06	6.59	06	GLOB	UNIF	WV	0	1
504	LOAD	X	36	37	6.59*	10	6.59*	10	GLOB	UNIF	WV	0	1
505	LOAD	Y	36	37	6.59	06	6.59	06	GLOB	UNIF	WV	0	1
506	LOAD	X	36	37	13.18*	10	6.59*	10	GLOB	UNIF	WV	0	1
507	LOAD	Y	36	37	13.18	06	6.59	06	GLOB	UNIF	WV	0	1
508	LOAD	X	37	38	0.00*	07	10.07*	07	GLOB	UNIF	WV	0	1
509	LOAD	Y	37	38	0.00	03	10.07	03	GLOB	UNIF	WV	0	1
510	LOAD	X	37	38	10.07*	07	10.07*	07	GLOB	UNIF	WV	0	1
511	LOAD	Y	37	38	10.07	03	10.07	03	GLOB	UNIF	WV	0	1
512	LOAD	X	37	38	20.15*	07	10.07*	07	GLOB	UNIF	WV	0	1
513	LOAD	Y	37	38	20.15	03	10.07	02	GLOB	UNIF	WV	0	1
514	LOAD	X	38	39	0.00	07	10.07	07	GLOB	UNIF	WV	0	1
515	LOAD	Y	38	39	0.00	02	10.07	03	GLOB	UNIF	WV	0	1
516	LOAD	X	38	39	10.07	07	10.07	07	GLOB	UNIF	WV	0	1
517	LOAD	Y	38	39	10.07	03	10.07	03	GLOB	UNIF	WV	0	1
518	LOAD	X	38	39	20.15	07	10.07	07	GLOB	UNIF	WV	0	1
519	LOAD	Y	38	39	20.15	03	10.07	03	GLOB	UNIF	WV	0	1
520	LOAD	X	39	34	0.00	10	6.59	10	GLOB	UNIF	WV	0	1
521	LOAD	Y	39	34	0.00	06	6.59	06	GLOB	UNIF	WV	0	1
522	LOAD	X	39	34	6.59	10	6.59	10	GLOB	UNIF	WV	0	1
523	LOAD	Y	39	34	6.59	06	6.59	06	GLOB	UNIF	WV	0	1
524	LOAD	X	39	34	13.18	10	6.59	10	GLOB	UNIF	WV	0	1
525	LOAD	Y	39	34	13.18	06	6.59	06	GLOB	UNIF	WV	0	1
526	LOAD	X	35	37	0.00	10	6.59	10	GLOB	UNIF	WV	0	1
527	LOAD	Y	35	37	0.00	06	6.59	06	GLOB	UNIF	WV	0	1
528	LOAD	X	35	37	6.59	10	6.59	10	GLOB	UNIF	WV	0	1
529	LOAD	Y	35	37	6.59	06	6.59	06	GLOB	UNIF	WV	0	1

530	LOAD	X	35	37	13.18	10	6.59	10	GLOB UNIF	WV	0	1
531	LOAD	Y	35	37	13.18	06	6.59	06	GLOB UNIF	WV	0	1
532	LOAD	Y	37	39	0.00	24	6.59	24	GLOB UNIF	WV	0	1
533	LOAD	Y	37	39	6.59	24	6.59	24	GLOB UNIF	WV	0	1
534	LOAD	Y	37	39	13.17	24	6.59	24	GLOB UNIF	WV	0	1
535	LOAD	X	39	35	0.00-	10	6.59-	10	GLOB UNIF	WV	0	1
536	LOAD	Y	39	35	0.00	06	6.59	06	GLOB UNIF	WV	0	1
537	LOAD	X	39	35	6.59-	10	6.59-	10	GLOB UNIF	WV	0	1
538	LOAD	Y	39	35	6.59	06	6.59	06	GLOB UNIF	WV	0	1
539	LOAD	X	39	35	13.18-	10	6.59-	10	GLOB UNIF	WV	0	1
540	LOAD	Y	39	35	13.18	06	6.59	06	GLOB UNIF	WV	0	1
541	LOAD	Y	49	50	0.00	46	5.05	46	GLOB UNIF	WV	0	1
542	LOAD	Y	49	50	5.05	46	5.05	46	GLOB UNIF	WV	0	1
543	LOAD	Y	49	50	10.10	46	5.05	46	GLOB UNIF	WV	0	1
544	LOAD	Y	50	51	0.00	46	5.05	46	GLOB UNIF	WV	0	1
545	LOAD	Y	50	51	5.05	46	5.05	46	GLOB UNIF	WV	0	1
546	LOAD	Y	50	51	10.10	46	5.05	46	GLOB UNIF	WV	0	1
547	LOAD	X	51	52	0.00-	20	5.05-	20	GLOB UNIF	WV	0	1
548	LOAD	Y	51	52	0.00	12	5.05	12	GLOB UNIF	WV	0	1
549	LOAD	X	51	52	5.05-	20	5.05-	21	GLOB UNIF	WV	0	1
550	LOAD	Y	51	52	5.05	12	5.05	12	GLOB UNIF	WV	0	1
551	LOAD	X	51	52	10.10-	21	5.05-	21	GLOB UNIF	WV	0	1
552	LOAD	Y	51	52	10.10	12	5.05	12	GLOB UNIF	WV	0	1
553	LOAD	X	52	53	0.00-	21	5.05-	21	GLOB UNIF	WV	0	1
554	LOAD	Y	52	53	0.00	12	5.05	12	GLOB UNIF	WV	0	1
555	LOAD	X	52	53	5.05-	21	5.05-	21	GLOB UNIF	WV	0	1
556	LOAD	Y	52	53	5.05	12	5.05	12	GLOB UNIF	WV	0	1
557	LOAD	X	52	53	10.10-	21	5.05-	21	GLOB UNIF	WV	0	1
558	LOAD	Y	52	53	10.10	12	5.05	12	GLOB UNIF	WV	0	1
559	LOAD	X	53	54	0.00	21	5.05	21	GLOB UNIF	WV	0	1
560	LOAD	Y	53	54	0.00	12	5.05	12	GLOB UNIF	WV	0	1
561	LOAD	X	53	54	5.05	21	5.05	21	GLOB UNIF	WV	0	1
562	LOAD	Y	53	54	5.05	12	5.05	12	GLOB UNIF	WV	0	1
563	LOAD	X	53	54	10.10	21	5.05	21	GLOB UNIF	WV	0	1
564	LOAD	Y	53	54	10.10	12	5.05	12	GLOB UNIF	WV	0	1
565	LOAD	X	54	49	0.00	21	5.05	21	GLOB UNIF	WV	0	1
566	LOAD	Y	54	49	0.00	12	5.05	12	GLOB UNIF	WV	0	1
567	LOAD	X	54	49	5.05	21	5.05	20	GLOB UNIF	WV	0	1
568	LOAD	Y	54	49	5.05	12	5.05	12	GLOB UNIF	WV	0	1
569	LOAD	X	54	49	10.10	20	5.05	20	GLOB UNIF	WV	0	1
570	LOAD	Y	54	49	10.10	12	5.05	12	GLOB UNIF	WV	0	1
571	LOAD	X	50	52	0.00	16	5.05	16	GLOB UNIF	WV	0	1
572	LOAD	Y	50	52	0.00	09	5.05	09	GLOB UNIF	WV	0	1
573	LOAD	X	50	52	5.05	16	5.05	17	GLOB UNIF	WV	0	1
574	LOAD	Y	50	52	5.05	09	5.05	10	GLOB UNIF	WV	0	1
575	LOAD	X	50	52	10.10	17	5.05	17	GLOB UNIF	WV	0	1
576	LOAD	Y	50	52	10.10	10	5.05	10	GLOB UNIF	WV	0	1
577	LOAD	Y	52	54	0.00	39	5.05	39	GLOB UNIF	WV	0	1
578	LOAD	Y	52	54	5.05	39	5.05	39	GLOB UNIF	WV	0	1
579	LOAD	Y	52	54	10.09	39	5.05	39	GLOB UNIF	WV	0	1
580	LOAD	X	54	50	0.00-	17	5.05-	17	GLOB UNIF	WV	0	1
581	LOAD	Y	54	50	0.00	10	5.05	10	GLOB UNIF	WV	0	1
582	LOAD	X	54	50	5.05-	17	5.05-	16	GLOB UNIF	WV	0	1
583	LOAD	Y	54	50	5.05	10	5.05	09	GLOB UNIF	WV	0	1
584	LOAD	X	54	50	10.10-	16	5.05-	16	GLOB UNIF	WV	0	1
585	LOAD	Y	54	50	10.10	09	5.05	09	GLOB UNIF	WV	0	1

586	LOAD	X	11	22	0.00-	1	13.44-	1	GLOB	UNIF	WV	0 1
587	LOAD	Y	11	22	0.00	19	13.44	19	GLOB	UNIF	WV	0 1
588	LOAD	Z	11	22	0.00-	1	13.44-	1	GLOB	UNIF	WV	0 1
589	LOAD	X	11	22	13.44-	1	13.44-	1	GLOB	UNIF	WV	0 1
590	LOAD	Y	11	22	13.44	19	13.44	20	GLOB	UNIF	WV	0 1
591	LOAD	Z	11	22	13.44-	1	13.44-	1	GLOB	UNIF	WV	0 1
592	LOAD	X	11	22	26.88-	1	13.44-	1	GLOB	UNIF	WV	0 1
593	LOAD	Y	11	22	26.88	20	13.44	21	GLOB	UNIF	WV	0 1
594	LOAD	Z	11	22	26.88-	1	13.44-	1	GLOB	UNIF	WV	0 1
595	LOAD	X	11	24	0.00	1	13.44	1	GLOB	UNIF	WV	0 1
596	LOAD	Y	11	24	0.00	19	13.44	19	GLOB	UNIF	WV	0 1
597	LOAD	Z	11	24	0.00-	1	13.44-	1	GLOB	UNIF	WV	0 1
598	LOAD	X	11	24	13.44	1	13.44	1	GLOB	UNIF	WV	0 1
599	LOAD	Y	11	24	13.44	19	13.44	20	GLOB	UNIF	WV	0 1
600	LOAD	Z	11	24	13.44-	1	13.44-	1	GLOB	UNIF	WV	0 1
601	LOAD	X	11	24	26.88	1	13.44	1	GLOB	UNIF	WV	0 1
602	LOAD	Y	11	24	26.88	20	13.44	21	GLOB	UNIF	WV	0 1
603	LOAD	Z	11	24	26.88-	1	13.44-	1	GLOB	UNIF	WV	0 1
604	LOAD	X	13	24	0.00-	03	13.44-	03	GLOB	UNIF	WV	0 1
605	LOAD	Y	13	24	0.00	14	13.44	14	GLOB	UNIF	WV	0 1
606	LOAD	Z	13	24	0.00	09	13.44	09	GLOB	UNIF	WV	0 1
607	LOAD	X	13	24	13.44-	03	13.44-	03	GLOB	UNIF	WV	0 1
608	LOAD	Y	13	24	13.44	14	13.44	14	GLOB	UNIF	WV	0 1
609	LOAD	Z	13	24	13.44	09	13.44	09	GLOB	UNIF	WV	0 1
610	LOAD	X	13	24	26.88-	03	13.44-	03	GLOB	UNIF	WV	0 1
611	LOAD	Y	13	24	26.88	14	13.44	15	GLOB	UNIF	WV	0 1
612	LOAD	Z	13	24	26.88	09	13.44	09	GLOB	UNIF	WV	0 1
613	LOAD	X	13	26	0.00-	04	13.44-	04	GLOB	UNIF	WV	0 1
614	LOAD	Y	13	26	0.00	16	13.44	16	GLOB	UNIF	WV	0 1
615	LOAD	Z	13	26	0.00-	08	13.44-	08	GLOB	UNIF	WV	0 1
616	LOAD	X	13	26	13.44-	04	13.44-	04	GLOB	UNIF	WV	0 1
617	LOAD	Y	13	26	13.44	16	13.44	17	GLOB	UNIF	WV	0 1
618	LOAD	Z	13	26	13.44-	08	13.44-	08	GLOB	UNIF	WV	0 1
619	LOAD	X	13	26	26.88-	04	13.44-	04	GLOB	UNIF	WV	0 1
620	LOAD	Y	13	26	26.88	17	13.44	17	GLOB	UNIF	WV	0 1
621	LOAD	Z	13	26	26.88-	08	13.44-	09	GLOB	UNIF	WV	0 1
622	LOAD	X	15	26	0.00	04	13.44	04	GLOB	UNIF	WV	0 1
623	LOAD	Y	15	26	0.00	16	13.44	16	GLOB	UNIF	WV	0 1
624	LOAD	Z	15	26	0.00-	08	13.44-	08	GLOB	UNIF	WV	0 1
625	LOAD	X	15	26	13.44	04	13.44	04	GLOB	UNIF	WV	0 1
626	LOAD	Y	15	26	13.44	16	13.44	17	GLOB	UNIF	WV	0 1
627	LOAD	Z	15	26	13.44-	08	13.44-	08	GLOB	UNIF	WV	0 1
628	LOAD	X	15	26	26.88	04	13.44	04	GLOB	UNIF	WV	0 1
629	LOAD	Y	15	26	26.88	17	13.44	17	GLOB	UNIF	WV	0 1
630	LOAD	Z	15	26	26.88-	08	13.44-	09	GLOB	UNIF	WV	0 1
631	LOAD	X	15	22	0.00	03	13.44	03	GLOB	UNIF	WV	0 1
632	LOAD	Y	15	22	0.00	14	13.44	14	GLOB	UNIF	WV	0 1
633	LOAD	Z	15	22	0.00	09	13.44	09	GLOB	UNIF	WV	0 1
634	LOAD	X	15	22	13.44	03	13.44	03	GLOB	UNIF	WV	0 1
635	LOAD	Y	15	22	13.44	14	13.44	14	GLOB	UNIF	WV	0 1
636	LOAD	Z	15	22	13.44	09	13.44	09	GLOB	UNIF	WV	0 1
637	LOAD	X	15	22	26.88	03	13.44	03	GLOB	UNIF	WV	0 1
638	LOAD	Y	15	22	26.88	14	13.44	15	GLOB	UNIF	WV	0 1
639	LOAD	Z	15	22	26.88	09	13.44	09	GLOB	UNIF	WV	0 1
640	LOAD	X	22	36	0.00	1	18.20	1	GLOB	UNIF	WV	0 1
641	LOAD	Y	22	36	0.00	27	18.20	29	GLOB	UNIF	WV	0 1

642	LOAD	Z	22	36	0.00-	1	18.20-	1	GLOB	UNIF	WV	0	1
643	LOAD	X	22	36	18.20	1	18.20	1	GLOB	UNIF	WV	0	1
644	LOAD	Y	22	36	18.20	29	18.20	32	GLOB	UNIF	WV	0	1
645	LOAD	Z	22	36	18.20-	1	18.20-	1	GLOB	UNIF	WV	0	1
646	LOAD	X	22	36	36.39	1	18.20	1	GLOB	UNIF	WV	0	1
647	LOAD	Y	22	36	36.39	32	18.20	36	GLOB	UNIF	WV	0	1
648	LOAD	Z	22	36	36.39-	1	18.20-	1	GLOB	UNIF	WV	0	1
649	LOAD	X	24	38	0.00-	08	20.96-	09	GLOB	UNIF	WV	0	1
650	LOAD	Y	24	38	0.00	11	20.96	13	GLOB	UNIF	WV	0	1
651	LOAD	Z	24	38	0.00-	10	20.96-	12	GLOB	UNIF	WV	0	1
652	LOAD	X	24	38	20.96-	09	20.96-	10	GLOB	UNIF	WV	0	1
653	LOAD	Y	24	38	20.96	13	20.96	14	GLOB	UNIF	WV	0	1
654	LOAD	Z	24	38	20.96-	12	20.96-	13	GLOB	UNIF	WV	0	1
655	LOAD	X	24	38	41.93-	10	20.96-	11	GLOB	UNIF	WV	0	1
656	LOAD	Y	24	38	41.93	14	20.96	15	GLOB	UNIF	WV	0	1
657	LOAD	Z	24	38	41.93-	13	20.96-	14	GLOB	UNIF	WV	0	1
658	LOAD	X	26	34	0.00	08	18.20	06	GLOB	UNIF	WV	0	1
659	LOAD	Y	26	34	0.00	14	18.20	15	GLOB	UNIF	WV	0	1
660	LOAD	Z	26	34	0.00	12	18.20	13	GLOB	UNIF	WV	0	1
661	LOAD	X	26	34	18.20	08	18.20	09	GLOB	UNIF	WV	0	1
662	LOAD	Y	26	34	18.20	15	18.20	16	GLOB	UNIF	WV	0	1
663	LOAD	Z	26	34	18.20	13	18.20	14	GLOB	UNIF	WV	0	1
664	LOAD	X	26	34	36.39	09	18.20	09	GLOB	UNIF	WV	0	1
665	LOAD	Y	26	34	36.39	16	18.20	17	GLOB	UNIF	WV	0	1
666	LOAD	Z	26	34	36.39	14	18.20	15	GLOB	UNIF	WV	0	1
667	LOAD	X	36	49	0.00-	1	11.86-	02	GLOB	UNIF	WV	0	1
668	LOAD	Y	36	49	0.00	36	11.86	40	GLOB	UNIF	WV	0	1
669	LOAD	Z	36	49	0.00-	1	11.86-	1	GLOB	UNIF	WV	0	1
670	LOAD	X	36	49	11.86-	02	11.86-	02	GLOB	UNIF	WV	0	1
671	LOAD	Y	36	49	11.86	40	11.86	44	GLOB	UNIF	WV	0	1
672	LOAD	Z	36	49	11.86-	1	11.86-	02	GLOB	UNIF	WV	0	1
673	LOAD	X	36	49	23.72-	02	11.86-	02	GLOB	UNIF	WV	0	1
674	LOAD	Y	36	49	23.72	44	11.86	50	GLOB	UNIF	WV	0	1
675	LOAD	Z	36	49	23.72-	02	11.86-	02	GLOB	UNIF	WV	0	1
676	LOAD	X	36	49	35.58-	02	11.86-	02	GLOB	UNIF	WV	0	1
677	LOAD	Y	36	49	35.58	50	11.86	58	GLOB	UNIF	WV	0	1
678	LOAD	Z	36	49	35.58-	02	11.86-	02	GLOB	UNIF	WV	0	1
679	LOAD	X	38	51	0.00-	08	13.93-	09	GLOB	UNIF	WV	0	1
680	LOAD	Y	38	51	0.00	15	13.93	17	GLOB	UNIF	WV	0	1
681	LOAD	Z	38	51	0.00	16	13.93	18	GLOB	UNIF	WV	0	1
682	LOAD	X	38	51	13.93-	09	13.93-	10	GLOB	UNIF	WV	0	1
683	LOAD	Y	38	51	13.93	17	13.93	19	GLOB	UNIF	WV	0	1
684	LOAD	Z	38	51	13.93	18	13.93	21	GLOB	UNIF	WV	0	1
685	LOAD	X	38	51	27.86-	10	13.93-	11	GLOB	UNIF	WV	0	1
686	LOAD	Y	38	51	27.86	19	13.93	21	GLOB	UNIF	WV	0	1
687	LOAD	Z	38	51	27.86	21	13.93	23	GLOB	UNIF	WV	0	1
688	LOAD	X	38	51	41.79-	11	13.93-	12	GLOB	UNIF	WV	0	1
689	LOAD	Y	38	51	41.79	21	13.93	23	GLOB	UNIF	WV	0	1
690	LOAD	Z	38	51	41.79	23	13.93	26	GLOB	UNIF	WV	0	1
691	LOAD	X	34	53	0.00	09	9.49	10	GLOB	UNIF	WV	0	1
692	LOAD	Y	34	53	0.00	23	9.49	25	GLOB	UNIF	WV	0	1
693	LOAD	Z	34	53	0.00-	15	9.49-	16	GLOB	UNIF	WV	0	1
694	LOAD	X	34	53	9.49	10	9.49	11	GLOB	UNIF	WV	0	1
695	LOAD	Y	34	53	9.49	25	9.49	28	GLOB	UNIF	WV	0	1
696	LOAD	Z	34	53	9.49-	16	9.49-	18	GLOB	UNIF	WV	0	1
697	LOAD	X	34	53	18.97	11	9.49	13	GLOB	UNIF	WV	0	1

698	LOAD	Y	34	53	18.97	28	9.49	31	GLOB	UNIF	WV	0	1
699	LOAD	Z	34	53	18.97-	18	9.49-	20	GLOB	UNIF	WV	0	1
700	LOAD	X	34	53	28.46	13	9.49	14	GLOB	UNIF	WV	0	1
701	LOAD	Y	34	53	28.46	31	9.49	34	GLOB	UNIF	WV	0	1
702	LOAD	Z	34	53	28.46-	20	9.49-	22	GLOB	UNIF	WV	0	1
703	LOAD	X	34	53	37.95	14	9.49	15	GLOB	UNIF	WV	0	1
704	LOAD	Y	34	53	37.95	34	9.49	38	GLOB	UNIF	WV	0	1
705	LOAD	Z	34	53	37.95-	22	9.49-	25	GLOB	UNIF	WV	0	1
706	LOAD	Y	55	58	0.00	113	5.70	126	GLOB	UNIF	WV	0	1
707	LOAD	Y	55	58	5.70	126	5.70	141	GLOB	UNIF	WV	0	1
708	LOAD	Y	55	58	11.40	141	5.70	158	GLOB	UNIF	WV	0	1
709	LOAD	Y	55	58	17.10	158	5.70	178	GLOB	UNIF	WV	0	1
710	LOAD	Y	55	58	22.80	178	5.70	202	GLOB	UNIF	WV	0	1
711	LOAD	Y	58	61	0.00	202	4.19	221	GLOB	UNIF	WV	0	1
712	LOAD	Y	58	61	4.19	221	4.19	244	GLOB	UNIF	WV	0	1
713	LOAD	Y	58	61	8.39	244	4.19	270	GLOB	UNIF	WV	0	1
714	LOAD	Y	56	59	0.00	113	5.70	126	GLOB	UNIF	WV	0	1
715	LOAD	Y	56	59	5.70	126	5.70	141	GLOB	UNIF	WV	0	1
716	LOAD	Y	56	59	11.40	141	5.70	158	GLOB	UNIF	WV	0	1
717	LOAD	Y	56	59	17.10	158	5.70	178	GLOB	UNIF	WV	0	1
718	LOAD	Y	56	59	22.80	178	5.70	202	GLOB	UNIF	WV	0	1
719	LOAD	Y	59	64	0.00	202	4.19	221	GLOB	UNIF	WV	0	1
720	LOAD	Y	59	64	4.19	221	4.19	244	GLOB	UNIF	WV	0	1
721	LOAD	Y	59	64	8.39	244	4.19	270	GLOB	UNIF	WV	0	1
722	LOAD	Y	57	60	0.00	116	5.70	129	GLOB	UNIF	WV	0	1
723	LOAD	Y	57	60	5.70	129	5.70	143	GLOB	UNIF	WV	0	1
724	LOAD	Y	57	60	11.40	143	5.70	160	GLOB	UNIF	WV	0	1
725	LOAD	Y	57	60	17.10	160	5.70	180	GLOB	UNIF	WV	0	1
726	LOAD	Y	57	60	22.80	180	5.70	201	GLOB	UNIF	WV	0	1
727	LOAD	Y	60	70	0.00	201	2.00	210	GLOB	UNIF	WV	0	1
728	LOAD	Y	60	70	2.00	210	2.00	220	GLOB	UNIF	WV	0	1
729	LOAD	Y	60	70	4.00	220	2.00	231	GLOB	UNIF	WV	0	1
730	LOAD	Y	70	67	0.00	231	.22	232	GLOB	UNIF	WV	0	1
731	LOAD	Y	70	67	.22	232	.22	233	GLOB	UNIF	WV	0	1
732	LOAD	Y	70	67	.44	233	.22	234	GLOB	UNIF	WV	0	1
733	LOAD	Y	70	67	.67	234	.22	235	GLOB	UNIF	WV	0	1
734	LOAD	Y	70	67	.89	235	.22	237	GLOB	UNIF	WV	0	1
735	LOAD	Y	70	67	1.11	237	.22	238	GLOB	UNIF	WV	0	1
736	LOAD	Y	70	67	1.33	238	.22	239	GLOB	UNIF	WV	0	1
737	LOAD	Y	70	67	1.56	239	.22	241	GLOB	UNIF	WV	0	1
738	LOAD	Y	70	67	1.78	241	.22		GLOB	UNIF	WV	0	1
739	LOAD	Y	58	59	0.00	71	9.67	71	GLOB	UNIF	WV	0	1
740	LOAD	Y	58	59	9.67	71	9.67	71	GLOB	UNIF	WV	0	1
741	LOAD	Y	58	59	19.33	71	9.67	71	GLOB	UNIF	WV	0	1
742	LOAD	X	59	60	0.00-	31	9.67-	32	GLOB	UNIF	WV	0	1
743	LOAD	Y	59	60	0.00	18	9.67	16	GLOB	UNIF	WV	0	1
744	LOAD	X	59	60	9.67-	32	9.67-	32	GLOB	UNIF	WV	0	1
745	LOAD	Y	59	60	9.67	18	9.67	16	GLOB	UNIF	WV	0	1
746	LOAD	X	59	60	19.33-	32	9.67-	31	GLOB	UNIF	WV	0	1
747	LOAD	Y	59	60	19.33	18	9.67	16	GLOB	UNIF	WV	0	1
748	LOAD	X	60	58	0.00	31	9.67	32	GLOB	UNIF	WV	0	1
749	LOAD	Y	60	58	0.00	18	9.67	16	GLOB	UNIF	WV	0	1
750	LOAD	X	60	58	9.67	32	9.67	32	GLOB	UNIF	WV	0	1
751	LOAD	Y	60	58	9.67	18	9.67	18	GLOB	UNIF	WV	0	1
752	LOAD	X	60	58	19.33	32	9.67	31	GLOB	UNIF	WV	0	1
753	LOAD	Y	60	58	19.33	18	9.67	18	GLOB	UNIF	WV	0	1

754	LOAD	Y	59	61	0.00	71	9.13	78			GLOB	UNIF	WV	0	1
755	LOAD	Y	59	61	9.13	78	9.13	86			GLOB	UNIF	WV	0	1
756	LOAD	Y	59	61	18.25	86	9.13	95			GLOB	UNIF	WV	0	1
757	LOAD	X	60	64	0.00-	24	8.41-	27			GLOB	UNIF	WV	0	1
758	LOAD	Y	60	64	0.00	29	8.41	33			GLOB	UNIF	WV	0	1
759	LOAD	Z	60	64	0.00	25	8.41	28			GLOB	UNIF	WV	0	1
760	LOAD	X	60	64	8.41-	27	8.41-	30			GLOB	UNIF	WV	0	1
761	LOAD	Y	60	64	8.41	33	8.41	36			GLOB	UNIF	WV	0	1
762	LOAD	Z	60	64	8.41	28	8.41	31			GLOB	UNIF	WV	0	1
763	LOAD	X	60	64	16.81-	30	8.41-	33			GLOB	UNIF	WV	0	1
764	LOAD	Y	60	64	16.81	36	8.41	39			GLOB	UNIF	WV	0	1
765	LOAD	Z	60	64	16.81	31	8.41	34			GLOB	UNIF	WV	0	1
766	LOAD	X	58	67	0.00	24	7.07	27			GLOB	UNIF	WV	0	1
767	LOAD	Y	58	67	0.00	29	7.07	32			GLOB	UNIF	WV	0	1
768	LOAD	Z	58	67	0.00-	25	7.07-	28			GLOB	UNIF	WV	0	1
769	LOAD	X	58	67	7.07	27	7.07	29			GLOB	UNIF	WV	0	1
770	LOAD	Y	58	67	7.07	32	7.07	35			GLOB	UNIF	WV	0	1
771	LOAD	Z	58	67	7.07-	28	7.07-	30			GLOB	UNIF	WV	0	1
772	LOAD	X	58	67	14.14	29	7.07	31			GLOB	UNIF	WV	0	1
773	LOAD	Y	58	67	14.14	35	7.07	37			GLOB	UNIF	WV	0	1
774	LOAD	Z	58	67	14.14-	30	7.07-	32			GLOB	UNIF	WV	0	1
775	LOAD	Y	70	66	0.00	42	.33	43			GLOB	UNIF	WV	0	1
776	LOAD	Y	70	66	.33	43	.33	43			GLOB	UNIF	WV	0	1
777	LOAD	Y	70	66	.66	43	.33	43			GLOB	UNIF	WV	0	1
778	LOAD	Y	70	66	1.00	43	.33	43			GLOB	UNIF	WV	0	1
779	LOAD	Y	70	66	1.33	43	.33	43			GLOB	UNIF	WV	0	1
780	LOAD	Y	70	66	1.66	43	.33	44			GLOB	UNIF	WV	0	1
781	LOAD	Y	70	66	1.99	44	.33	44			GLOB	UNIF	WV	0	1
782	LOAD	Y	70	66	2.33	44	.33	44			GLOB	UNIF	WV	0	1
783	LOAD	Y	70	66	2.66	44	.33				GLOB	UNIF	WV	0	1
784	LOAD	Y	70	68	0.00	42	.33	43			GLOB	UNIF	WV	0	1
785	LOAD	Y	70	68	.33	43	.33	43			GLOB	UNIF	WV	0	1
786	LOAD	Y	70	68	.66	43	.33	43			GLOB	UNIF	WV	0	1
787	LOAD	Y	70	68	1.00	43	.33	43			GLOB	UNIF	WV	0	1
788	LOAD	Y	70	68	1.33	43	.33	43			GLOB	UNIF	WV	0	1
789	LOAD	Y	70	68	1.66	43	.33	44			GLOB	UNIF	WV	0	1
790	LOAD	Y	70	68	1.99	44	.33	44			GLOB	UNIF	WV	0	1
791	LOAD	Y	70	68	2.33	44	.33	44			GLOB	UNIF	WV	0	1
792	LOAD	Y	70	68	2.66	44	.33				GLOB	UNIF	WV	0	1
793	LOADCN		2												
794	LOAD	Y	43	55	4.08-	345					GLOB	CONC	WN	1	2
795	LOAD	X	43	55					4.08	244106	GLOB	MOMT	WN	1	2
796	LOAD	Y	44	56	4.08-	345					GLOB	CONC	WN	1	2
797	LOAD	X	44	56					4.08	244106	GLOB	MOMT	WN	1	2
798	LOAD	Y	45	57	4.07-	345					GLOB	CONC	WN	1	2
799	LOAD	X	45	57					4.07	244106	GLOB	MOMT	WN	1	2
800	LOAD	Y	43	55	4.08-	1111					GLOB	CONC	WN	2	2
801	LOAD	X	43	55					4.08	653247	GLOB	MOMT	WN	2	2
802	LOAD	Y	44	56	4.08-	1111					GLOB	CONC	WN	2	2
803	LOAD	X	44	56					4.08	653247	GLOB	MOMT	WN	2	2
804	LOAD	Y	45	57	4.07-	1111					GLOB	CONC	WN	2	2
805	LOAD	X	45	57					4.07	653247	GLOB	MOMT	WN	2	2
806	LOAD	X	10	22	0.00-	1	10.81-	1			GLOB	UNIF	WV	0	2
807	LOAD	Y	10	22	0.00-	51	10.81-	52			GLOB	UNIF	WV	0	2
808	LOAD	Z	10	22	0.00	04	10.81	04			GLOB	UNIF	WV	0	2
809	LOAD	X	10	22	10.81-	1	10.81-	1			GLOB	UNIF	WV	0	2

B10	LOAD	Y	10	22	10.81-	52	10.81-	54	GLOB UNIF	WV	0	2
B11	LOAD	Z	10	22	10.81	04	10.81	04	GLOB UNIF	WV	0	2
B12	LOAD	Y	10	22	21.63-	1	10.81-	1	GLOB UNIF	WV	0	2
B13	LOAD	Y	10	22	21.63-	54	10.81-	57	GLOB UNIF	WV	0	2
B14	LOAD	Z	10	22	21.63	04	10.81	05	GLOB UNIF	WV	0	2
B15	LOAD	X	22	34	0.00-	1	10.81-	1	GLOB UNIF	WV	0	2
B16	LOAD	Y	22	34	0.00-	57	10.81-	62	GLOB UNIF	WV	0	2
B17	LOAD	Z	22	34	0.00	05	10.81	05	GLOB UNIF	WV	0	2
B18	LOAD	X	22	34	10.81-	1	10.81-	1	GLOB UNIF	WV	0	2
B19	LOAD	Y	22	34	10.81-	62	10.81-	68	GLOB UNIF	WV	0	2
B20	LOAD	Z	22	34	10.81	05	10.81	05	GLOB UNIF	WV	0	2
B21	LOAD	X	22	34	21.63-	1	10.81-	1	GLOB UNIF	WV	0	2
B22	LOAD	Y	22	34	21.63-	68	10.81-	76	GLOB UNIF	WV	0	2
B23	LOAD	Z	22	34	21.63	05	10.81	06	GLOB UNIF	WV	0	2
B24	LOAD	X	34	40	0.00-	1	4.73-	1	GLOB UNIF	WV	0	2
B25	LOAD	Y	34	40	0.00-	78	4.73-	82	GLOB UNIF	WV	0	2
B26	LOAD	Z	34	40	0.00	05	4.73	06	GLOB UNIF	WV	0	2
B27	LOAD	X	34	40	4.73-	1	4.73-	1	GLOB UNIF	WV	0	2
B28	LOAD	Y	34	40	4.73-	82	4.73-	87	GLOB UNIF	WV	0	2
B29	LOAD	Z	34	40	4.73	06	4.73	06	GLOB UNIF	WV	0	2
B30	LOAD	X	34	40	9.45-	1	4.73-	1	GLOB UNIF	WV	0	2
B31	LOAD	Y	34	40	9.45-	87	4.73-	93	GLOB UNIF	WV	0	2
B32	LOAD	Z	34	40	9.45	06	4.73	06	GLOB UNIF	WV	0	2
B33	LOAD	X	40	49	0.00-	1	6.09-	1	GLOB UNIF	WV	0	2
B34	LOAD	Y	40	49	0.00-	92	6.09-	101	GLOB UNIF	WV	0	2
B35	LOAD	Z	40	49	0.00	08	6.09	09	GLOB UNIF	WV	0	2
B36	LOAD	X	40	49	6.09-	1	6.09-	1	GLOB UNIF	WV	0	2
B37	LOAD	Y	40	49	6.09-	101	6.09-	111	GLOB UNIF	WV	0	2
B38	LOAD	Z	40	49	6.09	09	6.09	10	GLOB UNIF	WV	0	2
B39	LOAD	X	40	49	12.17-	1	6.09-	02	GLOB UNIF	WV	0	2
B40	LOAD	Y	40	49	12.17-	111	6.09-	123	GLOB UNIF	WV	0	2
B41	LOAD	Z	40	49	12.17	10	6.09	11	GLOB UNIF	WV	0	2
B42	LOAD	X	49	55	0.00-	1	1.52-	1	GLOB UNIF	WV	0	2
B43	LOAD	Y	49	55	0.00-	123	1.52-	126	GLOB UNIF	WV	0	2
B44	LOAD	Z	49	55	0.00	10	1.52	10	GLOB UNIF	WV	0	2
B45	LOAD	X	49	55	1.52-	1	1.52-	1	GLOB UNIF	WV	0	2
B46	LOAD	Y	49	55	1.52-	126	1.52-	129	GLOB UNIF	WV	0	2
B47	LOAD	Z	49	55	1.52	10	1.52	11	GLOB UNIF	WV	0	2
B48	LOAD	X	49	55	3.04-	1	1.52-	02	GLOB UNIF	WV	0	2
B49	LOAD	Y	49	55	3.04-	129	1.52-	133	GLOB UNIF	WV	0	2
B50	LOAD	Z	49	55	3.04	11	1.52	11	GLOB UNIF	WV	0	2
B51	LOAD	X	12	24	0.00	1	10.81	1	GLOB UNIF	WV	0	2
B52	LOAD	Y	12	24	0.00-	51	10.81-	52	GLOB UNIF	WV	0	2
B53	LOAD	Z	12	24	0.00	04	10.81	04	GLOB UNIF	WV	0	2
B54	LOAD	X	12	24	10.81	1	10.81	1	GLOB UNIF	WV	0	2
B55	LOAD	Y	12	24	10.81-	52	10.81-	54	GLOB UNIF	WV	0	2
B56	LOAD	Z	12	24	10.81	04	10.81	04	GLOB UNIF	WV	0	2
B57	LOAD	X	12	24	21.63	1	10.81	1	GLOB UNIF	WV	0	2
B58	LOAD	Y	12	24	21.63-	54	10.81-	57	GLOB UNIF	WV	0	2
B59	LOAD	Z	12	24	21.63	04	10.81	05	GLOB UNIF	WV	0	2
B60	LOAD	X	24	36	0.00	1	10.81	1	GLOB UNIF	WV	0	2
B61	LOAD	Y	24	36	0.00-	57	10.81-	62	GLOB UNIF	WV	0	2
B62	LOAD	Z	24	36	0.00	05	10.81	05	GLOB UNIF	WV	0	2
B63	LOAD	X	24	36	10.81	1	10.81	1	GLOB UNIF	WV	0	2
B64	LOAD	Y	24	36	10.81-	62	10.81-	68	GLOB UNIF	WV	0	2
B65	LOAD	Z	24	36	10.81	05	10.81	05	GLOB UNIF	WV	0	2

866	LOAD	X	24	36	21.63	1	10.81	1	GLOB UNIF	WV	0	2
867	LOAD	Y	24	36	21.63-	68	10.81-	76	GLOB UNIF	WV	0	2
868	LOAD	Z	24	36	21.63	05	10.81	06	GLOB UNIF	WV	0	2
869	LOAD	X	36	41	0.00	1	4.73	1	GLOB UNIF	WV	0	2
870	LOAD	Y	36	41	0.00-	78	4.73-	82	GLOB UNIF	WV	0	2
871	LOAD	Z	36	41	0.00	05	4.73	06	GLOB UNIF	WV	0	2
872	LOAD	X	36	41	4.73	1	4.73	1	GLOB UNIF	WV	0	2
873	LOAD	Y	36	41	4.73-	82	4.73-	87	GLOB UNIF	WV	0	2
874	LOAD	Z	36	41	4.73	06	4.73	06	GLOB UNIF	WV	0	2
875	LOAD	X	36	41	9.45	1	4.73	1	GLOB UNIF	WV	0	2
876	LOAD	Y	36	41	9.45-	87	4.73-	93	GLOB UNIF	WV	0	2
877	LOAD	Z	36	41	9.45	06	4.73	06	GLOB UNIF	WV	0	2
878	LOAD	X	41	51	0.00	1	6.09	1	GLOB UNIF	WV	0	2
879	LOAD	Y	41	51	0.00-	92	6.09-	101	GLOB UNIF	WV	0	2
880	LOAD	Z	41	51	0.00	08	6.09	09	GLOB UNIF	WV	0	2
881	LOAD	X	41	51	6.09	1	6.09	1	GLOB UNIF	WV	0	2
882	LOAD	Y	41	51	6.09-	101	6.09-	111	GLOB UNIF	WV	0	2
883	LOAD	Z	41	51	6.09	09	6.09	10	GLOB UNIF	WV	0	2
884	LOAD	X	41	51	12.17	1	6.09	02	GLOB UNIF	WV	0	2
885	LOAD	Y	41	51	12.17-	111	6.09-	123	GLOB UNIF	WV	0	2
886	LOAD	Z	41	51	12.17	10	6.09	11	GLOB UNIF	WV	0	2
887	LOAD	X	51	56	0.00	1	1.52	1	GLOB UNIF	WV	0	2
888	LOAD	Y	51	56	0.00-	123	1.52-	126	GLOB UNIF	WV	0	2
889	LOAD	Z	51	56	0.00	10	1.52	10	GLOB UNIF	WV	0	2
890	LOAD	X	51	56	1.52	1	1.52	1	GLOB UNIF	WV	0	2
891	LOAD	Y	51	56	1.52-	126	1.52-	129	GLOB UNIF	WV	0	2
892	LOAD	Z	51	56	1.52	10	1.52	11	GLOB UNIF	WV	0	2
893	LOAD	X	51	56	3.04	1	1.52	02	GLOB UNIF	WV	0	2
894	LOAD	Y	51	56	3.04-	129	1.52-	133	GLOB UNIF	WV	0	2
895	LOAD	Z	51	56	3.04	11	1.52	11	GLOB UNIF	WV	0	2
896	LOAD	Y	14	26	0.00-	39	10.81-	41	GLOB UNIF	WV	0	2
897	LOAD	Z	14	26	0.00-	07	10.81-	07	GLOB UNIF	WV	0	2
898	LOAD	Y	14	26	10.81-	41	10.81-	42	GLOB UNIF	WV	0	2
899	LOAD	Z	14	26	10.81-	07	10.81-	07	GLOB UNIF	WV	0	2
900	LOAD	Y	14	26	21.63-	42	10.81-	46	GLOB UNIF	WV	0	2
901	LOAD	Z	14	26	21.63-	07	10.81-	08	GLOB UNIF	WV	0	2
902	LOAD	Y	26	38	0.00-	45	10.86-	47	GLOB UNIF	WV	0	2
903	LOAD	Z	26	38	0.00	09	10.86	09	GLOB UNIF	WV	0	2
904	LOAD	Y	26	38	10.86-	47	10.86-	51	GLOB UNIF	WV	0	2
905	LOAD	Z	26	38	10.86	09	10.86	10	GLOB UNIF	WV	0	2
906	LOAD	Y	26	38	21.72-	51	10.86-	55	GLOB UNIF	WV	0	2
907	LOAD	Z	26	38	21.72	10	10.86	10	GLOB UNIF	WV	0	2
908	LOAD	Y	38	42	0.00-	51	5.01-	55	GLOB UNIF	WV	0	2
909	LOAD	Z	38	42	0.00-	20	5.01-	21	GLOB UNIF	WV	0	2
910	LOAD	Y	38	42	5.01-	55	5.01-	59	GLOB UNIF	WV	0	2
911	LOAD	Z	38	42	5.01-	21	5.01-	23	GLOB UNIF	WV	0	2
912	LOAD	Y	38	42	10.02-	59	5.01-	64	GLOB UNIF	WV	0	2
913	LOAD	Z	38	42	10.02-	23	5.01-	25	GLOB UNIF	WV	0	2
914	LOAD	Y	42	53	0.00-	53	5.31-	58	GLOB UNIF	WV	0	2
915	LOAD	Z	42	53	0.00-	33	5.31-	36	GLOB UNIF	WV	0	2
916	LOAD	Y	42	53	5.31-	58	5.31-	63	GLOB UNIF	WV	0	2
917	LOAD	Z	42	53	5.31-	36	5.31-	40	GLOB UNIF	WV	0	2
918	LOAD	Y	42	53	10.63-	64	5.31-	70	GLOB UNIF	WV	0	2
919	LOAD	Z	42	53	10.63-	40	5.31-	44	GLOB UNIF	WV	0	2
920	LOAD	Y	42	53	15.94-	70	5.31-	78	GLOB UNIF	WV	0	2
921	LOAD	Z	42	53	15.94-	44	5.31-	49	GLOB UNIF	WV	0	2

922	LOAD	Y	53	57	0.00-	106	1.52-	109	GLOB	UNIF	WV	0 2
923	LOAD	Z	53	57	0.00-	18	1.52-	18	GLOB	UNIF	WV	0 2
924	LOAD	Y	53	57	1.52-	109	1.52-	113	GLOB	UNIF	WV	0 2
925	LOAD	Z	53	57	1.52-	18	1.52-	19	GLOB	UNIF	WV	0 2
926	LOAD	Y	53	57	3.04-	113	1.52-	116	GLOB	UNIF	WV	0 2
927	LOAD	Z	53	57	3.04-	19	1.52-	19	GLOB	UNIF	WV	0 2
928	LOAD	Y	10	11	0.00-	23	9.67-	23	GLOB	UNIF	WV	0 2
929	LOAD	Y	10	11	9.67-	23	9.67-	23	GLOB	UNIF	WV	0 2
930	LOAD	Y	10	11	19.33-	23	9.67-	23	GLOB	UNIF	WV	0 2
931	LOAD	Y	11	12	0.00-	23	9.67-	23	GLOB	UNIF	WV	0 2
932	LOAD	Y	11	12	9.67-	23	9.67-	23	GLOB	UNIF	WV	0 2
933	LOAD	Y	11	12	19.33-	23	9.67-	23	GLOB	UNIF	WV	0 2
934	LOAD	X	12	13	0.00	10	9.67	10	GLOB	UNIF	WV	0 2
935	LOAD	Y	12	13	0.00-	06	9.67-	06	GLOB	UNIF	WV	0 2
936	LOAD	X	12	13	9.67	10	9.67	10	GLOB	UNIF	WV	0 2
937	LOAD	Y	12	13	9.67-	06	9.67-	06	GLOB	UNIF	WV	0 2
938	LOAD	X	12	13	19.33	10	9.67	09	GLOB	UNIF	WV	0 2
939	LOAD	Y	12	13	19.33-	06	9.67-	05	GLOB	UNIF	WV	0 2
940	LOAD	X	13	14	0.00	09	9.67	09	GLOB	UNIF	WV	0 2
941	LOAD	Y	13	14	0.00-	05	9.67-	05	GLOB	UNIF	WV	0 2
942	LOAD	X	13	14	9.67	09	9.67	08	GLOB	UNIF	WV	0 2
943	LOAD	Y	13	14	9.67-	05	9.67-	05	GLOB	UNIF	WV	0 2
944	LOAD	X	13	14	19.34	08	9.67	08	GLOB	UNIF	WV	0 2
945	LOAD	Y	13	14	19.34-	05	9.67-	05	GLOB	UNIF	WV	0 2
946	LOAD	X	14	15	0.00-	08	9.67-	08	GLOB	UNIF	WV	0 2
947	LOAD	Y	14	15	0.00-	05	9.67-	05	GLOB	UNIF	WV	0 2
948	LOAD	X	14	15	9.67-	08	9.67-	09	GLOB	UNIF	WV	0 2
949	LOAD	Y	14	15	9.67-	05	9.67-	05	GLOB	UNIF	WV	0 2
950	LOAD	X	14	15	19.34-	09	9.67-	09	GLOB	UNIF	WV	0 2
951	LOAD	Y	14	15	19.34-	05	9.67-	05	GLOB	UNIF	WV	0 2
952	LOAD	X	15	10	0.00-	09	9.67-	10	GLOB	UNIF	WV	0 2
953	LOAD	Y	15	10	0.00-	05	9.67-	06	GLOB	UNIF	WV	0 2
954	LOAD	X	15	10	9.67-	10	9.67-	10	GLOB	UNIF	WV	0 2
955	LOAD	Y	15	10	9.67-	06	9.67-	06	GLOB	UNIF	WV	0 2
956	LOAD	X	15	10	19.33-	10	9.67-	10	GLOB	UNIF	WV	0 2
957	LOAD	Y	15	10	19.33-	06	9.67-	06	GLOB	UNIF	WV	0 2
958	LOAD	X	11	13	0.00-	08	9.67-	08	GLOB	UNIF	WV	0 2
959	LOAD	Y	11	13	0.00-	04	9.67-	04	GLOB	UNIF	WV	0 2
960	LOAD	X	11	13	9.67-	08	9.67-	07	GLOB	UNIF	WV	0 2
961	LOAD	Y	11	13	9.67-	04	9.67-	04	GLOB	UNIF	WV	0 2
962	LOAD	X	11	13	19.33-	07	9.67-	07	GLOB	UNIF	WV	0 2
963	LOAD	Y	11	13	19.33-	04	9.67-	04	GLOB	UNIF	WV	0 2
964	LOAD	Y	13	15	0.00-	17	9.67-	17	GLOB	UNIF	WV	0 2
965	LOAD	Y	13	15	9.67-	17	9.67-	17	GLOB	UNIF	WV	0 2
966	LOAD	Y	13	15	19.33-	17	9.67-	17	GLOB	UNIF	WV	0 2
967	LOAD	X	15	11	0.00	07	9.67	07	GLOB	UNIF	WV	0 2
968	LOAD	Y	15	11	0.00-	04	9.67-	04	GLOB	UNIF	WV	0 2
969	LOAD	X	15	11	9.67	07	9.67	08	GLOB	UNIF	WV	0 2
970	LOAD	Y	15	11	9.67-	04	9.67-	04	GLOB	UNIF	WV	0 2
971	LOAD	X	15	11	19.33	08	9.67	08	GLOB	UNIF	WV	0 2
972	LOAD	Y	15	11	19.33-	04	9.67-	04	GLOB	UNIF	WV	0 2
973	LOAD	Y	22	23	0.00-	26	8.13-	26	GLOB	UNIF	WV	0 2
974	LOAD	Y	22	23	8.13-	26	8.13-	26	GLOB	UNIF	WV	0 2
975	LOAD	Y	22	23	16.25-	26	8.13-	26	GLOB	UNIF	WV	0 2
976	LOAD	Y	23	24	0.00-	26	8.13-	26	GLOB	UNIF	WV	0 2
977	LOAD	Y	23	24	8.13-	26	8.13-	26	GLOB	UNIF	WV	0 2

978	LOAD	Y	23	24	16.25-	26	8.13-	26	GLOB UNIF	WV 0 2
979	LOAD	X	24	25	0.00	11	8.13	11	GLOB UNIF	WV 0 2
980	LOAD	Y	24	25	0.00-	06	8.13-	06	GLOB UNIF	WV 0 2
981	LOAD	X	24	25	8.13	11	8.13	11	GLOB UNIF	WV 0 2
982	LOAD	Y	24	25	8.13-	06	8.13-	06	GLOB UNIF	WV 0 2
983	LOAD	X	24	25	16.25	11	8.13	11	GLOB UNIF	WV 0 2
984	LOAD	Y	24	25	16.25-	06	8.13-	06	GLOB UNIF	WV 0 2
985	LOAD	X	25	26	0.00	11	8.13	10	GLOB UNIF	WV 0 2
986	LOAD	Y	25	26	0.00-	06	8.13-	06	GLOB UNIF	WV 0 2
987	LOAD	X	25	26	8.13	10	8.13	10	GLOB UNIF	WV 0 2
988	LOAD	Y	25	26	8.13-	06	8.13-	06	GLOB UNIF	WV 0 2
989	LOAD	X	25	26	16.25	10	8.13	09	GLOB UNIF	WV 0 2
990	LOAD	Y	25	26	16.25-	06	8.13-	05	GLOB UNIF	WV 0 2
991	LOAD	X	26	27	0.00-	09	8.13-	10	GLOB UNIF	WV 0 2
992	LOAD	Y	26	27	0.00-	05	8.13-	06	GLOB UNIF	WV 0 2
993	LOAD	X	26	27	8.13-	10	8.13-	10	GLOB UNIF	WV 0 2
994	LOAD	Y	26	27	8.13-	06	8.13-	06	GLOB UNIF	WV 0 2
995	LOAD	X	26	27	16.25-	10	8.13-	11	GLOB UNIF	WV 0 2
996	LOAD	Y	26	27	16.25-	06	8.13-	06	GLOB UNIF	WV 0 2
997	LOAD	X	27	22	0.00-	11	8.13-	11	GLOB UNIF	WV 0 2
998	LOAD	Y	27	22	0.00-	06	8.13-	06	GLOB UNIF	WV 0 2
999	LOAD	X	27	22	8.13-	11	8.13-	11	GLOB UNIF	WV 0 2
1000	LOAD	Y	27	22	8.13-	06	8.13-	06	GLOB UNIF	WV 0 2
1001	LOAD	X	27	22	16.25-	11	8.13-	11	GLOB UNIF	WV 0 2
1002	LOAD	Y	27	22	16.25-	06	8.13-	06	GLOB UNIF	WV 0 2
1003	LOAD	X	23	25	0.00-	09	8.13-	09	GLOB UNIF	WV 0 2
1004	LOAD	Y	23	25	0.00-	05	8.13-	05	GLOB UNIF	WV 0 2
1005	LOAD	X	23	25	8.13-	09	8.13-	08	GLOB UNIF	WV 0 2
1006	LOAD	Y	23	25	8.13-	05	8.13-	05	GLOB UNIF	WV 0 2
1007	LOAD	X	23	25	16.25-	08	8.13-	08	GLOB UNIF	WV 0 2
1008	LOAD	Y	23	25	16.25-	05	8.13-	05	GLOB UNIF	WV 0 2
1009	LOAD	Y	25	27	0.00-	19	8.13-	19	GLOB UNIF	WV 0 2
1010	LOAD	Y	25	27	8.13-	19	8.13-	19	GLOB UNIF	WV 0 2
1011	LOAD	Y	25	27	16.25-	19	8.13-	19	GLOB UNIF	WV 0 2
1012	LOAD	X	27	23	0.00	18	8.13	08	GLOB UNIF	WV 0 2
1013	LOAD	Y	27	23	0.00-	05	8.13-	05	GLOB UNIF	WV 0 2
1014	LOAD	X	27	23	8.13	08	8.13	09	GLOB UNIF	WV 0 2
1015	LOAD	Y	27	23	8.13-	05	8.13-	05	GLOB UNIF	WV 0 2
1016	LOAD	X	27	23	16.25	09	8.13	09	GLOB UNIF	WV 0 2
1017	LOAD	Y	27	23	16.25-	05	8.13-	05	GLOB UNIF	WV 0 2
1018	LOAD	Y	34	35	0.00-	24	6.59-	24	GLOB UNIF	WV 0 2
1019	LOAD	Y	34	35	6.59-	24	6.59-	24	GLOB UNIF	WV 0 2
1020	LOAD	Y	34	35	13.18-	24	6.59-	24	GLOB UNIF	WV 0 2
1021	LOAD	Y	35	36	0.00-	24	6.59-	24	GLOB UNIF	WV 0 2
1022	LOAD	Y	35	36	6.59-	24	6.59-	24	GLOB UNIF	WV 0 2
1023	LOAD	Y	35	36	13.18-	24	6.59-	24	GLOB UNIF	WV 0 2
1024	LOAD	X	36	37	0.00	10	6.59	10	GLOB UNIF	WV 0 2
1025	LOAD	Y	36	37	0.00-	06	6.59-	06	GLOB UNIF	WV 0 2
1026	LOAD	X	36	37	6.59	10	6.59	10	GLOB UNIF	WV 0 2
1027	LOAD	Y	36	37	6.59-	06	6.59-	06	GLOB UNIF	WV 0 2
1028	LOAD	X	36	37	13.18	10	6.59	10	GLOB UNIF	WV 0 2
1029	LOAD	Y	36	37	13.18-	06	6.59-	06	GLOB UNIF	WV 0 2
1030	LOAD	X	37	38	0.00	07	10.07	07	GLOB UNIF	WV 0 2
1031	LOAD	Y	37	38	0.00-	02	10.07-	02	GLOB UNIF	WV 0 2
1032	LOAD	X	37	38	10.07	07	10.07	06	GLOB UNIF	WV 0 2
1033	LOAD	Y	37	38	10.07-	02	10.07-	02	GLOB UNIF	WV 0 2

1034	LOAD	X	37	38	20.15	06	10.07	06	GLOB	UNIF	WV	0 2
1035	LOAD	Y	37	38	20.15-	02	10.07-	02	GLOB	UNIF	WV	0 2
1036	LOAD	X	38	39	0.00-	06	10.07-	06	GLOB	UNIF	WV	0 2
1037	LOAD	Y	38	39	0.00-	02	10.07-	02	GLOB	UNIF	WV	0 2
1038	LOAD	X	38	39	10.07-	06	10.07-	07	GLOB	UNIF	WV	0 2
1039	LOAD	Y	38	39	10.07-	02	10.07-	02	GLOB	UNIF	WV	0 2
1040	LOAD	X	38	39	20.15-	07	10.07-	07	GLOB	UNIF	WV	0 2
1041	LOAD	Y	38	39	20.15-	02	10.07-	02	GLOB	UNIF	WV	0 2
1042	LOAD	X	39	34	0.00-	10	6.59-	10	GLOB	UNIF	WV	0 2
1043	LOAD	Y	39	34	0.00-	06	6.59-	06	GLOB	UNIF	WV	0 2
1044	LOAD	X	39	34	6.59-	10	6.59-	10	GLOB	UNIF	WV	0 2
1045	LOAD	Y	39	34	6.59-	06	6.59-	06	GLOB	UNIF	WV	0 2
1046	LOAD	X	39	34	13.18-	10	6.59-	10	GLOB	UNIF	WV	0 2
1047	LOAD	Y	39	34	13.18-	06	6.59-	06	GLOB	UNIF	WV	0 2
1048	LOAD	X	35	37	0.00-	10	6.59-	10	GLOB	UNIF	WV	0 2
1049	LOAD	Y	35	37	0.00-	06	6.59-	06	GLOB	UNIF	WV	0 2
1050	LOAD	X	35	37	6.59-	10	6.59-	10	GLOB	UNIF	WV	0 2
1051	LOAD	Y	35	37	6.59-	06	6.59-	06	GLOB	UNIF	WV	0 2
1052	LOAD	X	35	37	13.18-	10	6.59-	10	GLOB	UNIF	WV	0 2
1053	LOAD	Y	35	37	13.18-	06	6.59-	06	GLOB	UNIF	WV	0 2
1054	LOAD	Y	37	39	0.00-	23	6.59-	23	GLOB	UNIF	WV	0 2
1055	LOAD	Y	37	39	6.59-	23	6.59-	23	GLOB	UNIF	WV	0 2
1056	LOAD	Y	37	39	13.17-	23	6.59-	23	GLOB	UNIF	WV	0 2
1057	LOAD	X	39	35	0.00	10	6.59	10	GLOB	UNIF	WV	0 2
1058	LOAD	Y	39	35	0.00-	06	6.59-	06	GLOB	UNIF	WV	0 2
1059	LOAD	X	39	35	6.59	10	6.59	10	GLOB	UNIF	WV	0 2
1060	LOAD	Y	39	35	6.59-	06	6.59-	06	GLOB	UNIF	WV	0 2
1061	LOAD	X	39	35	13.18	10	6.59	10	GLOB	UNIF	WV	0 2
1062	LOAD	Y	39	35	13.18-	06	6.59-	06	GLOB	UNIF	WV	0 2
1063	LOAD	Y	49	50	0.00-	48	5.05-	48	GLOB	UNIF	WV	0 2
1064	LOAD	Y	49	50	5.05-	48	5.05-	48	GLOB	UNIF	WV	0 2
1065	LOAD	Y	49	50	10.10-	48	5.05-	48	GLOB	UNIF	WV	0 2
1066	LOAD	Y	50	51	0.00-	48	5.05-	48	GLOB	UNIF	WV	0 2
1067	LOAD	Y	50	51	5.05-	48	5.05-	48	GLOB	UNIF	WV	0 2
1068	LOAD	Y	50	51	10.10-	48	5.05-	48	GLOB	UNIF	WV	0 2
1069	LOAD	X	51	52	0.00	21	5.05	21	GLOB	UNIF	WV	0 2
1070	LOAD	Y	51	52	0.00-	12	5.05-	12	GLOB	UNIF	WV	0 2
1071	LOAD	X	51	52	5.05	21	5.05	20	GLOB	UNIF	WV	0 2
1072	LOAD	Y	51	52	5.05-	12	5.05-	12	GLOB	UNIF	WV	0 2
1073	LOAD	X	51	52	10.10	20	5.05	20	GLOB	UNIF	WV	0 2
1074	LOAD	Y	51	52	10.10-	12	5.05-	12	GLOB	UNIF	WV	0 2
1075	LOAD	X	52	53	0.00	20	5.05	20	GLOB	UNIF	WV	0 2
1076	LOAD	Y	52	53	0.00-	12	5.05-	11	GLOB	UNIF	WV	0 2
1077	LOAD	X	52	53	5.05	20	5.05	19	GLOB	UNIF	WV	0 2
1078	LOAD	Y	52	53	5.05-	11	5.05-	11	GLOB	UNIF	WV	0 2
1079	LOAD	X	52	53	10.10	19	5.05	18	GLOB	UNIF	WV	0 2
1080	LOAD	Y	52	53	10.10-	11	5.05-	11	GLOB	UNIF	WV	0 2
1081	LOAD	X	53	54	0.00-	18	5.05-	19	GLOB	UNIF	WV	0 2
1082	LOAD	Y	53	54	0.00-	11	5.05-	11	GLOB	UNIF	WV	0 2
1083	LOAD	X	53	54	5.05-	19	5.05-	20	GLOB	UNIF	WV	0 2
1084	LOAD	Y	53	54	5.05-	11	5.05-	11	GLOB	UNIF	WV	0 2
1085	LOAD	X	53	54	10.10-	21	5.05-	21	GLOB	UNIF	WV	0 2
1086	LOAD	Y	53	54	10.10-	11	5.05-	12	GLOB	UNIF	WV	0 2
1087	LOAD	X	54	49	0.00-	20	5.05-	20	GLOB	UNIF	WV	0 2
1088	LOAD	Y	54	49	0.00-	12	5.05-	12	GLOB	UNIF	WV	0 2
1089	LOAD	X	54	49	5.05-	20	5.05-	21	GLOB	UNIF	WV	0 2

1090	LOAD	Y	54	49	5.05-	12	5.05-	12	GLOB	UNIF	WV	0 2
1091	LOAD	X	54	49	10.10-	21	5.05-	21	GLOB	UNIF	WV	0 2
1092	LOAD	Y	54	49	10.10-	12	5.05-	12	GLOB	UNIF	WV	0 2
1093	LOAD	X	50	52	0.00-	17	5.05-	16	GLOB	UNIF	WV	0 2
1094	LOAD	Y	50	52	0.00-	10	5.05-	09	GLOB	UNIF	WV	0 2
1095	LOAD	X	50	52	5.05-	16	5.05-	16	GLOB	UNIF	WV	0 2
1096	LOAD	Y	50	52	5.05-	09	5.05-	09	GLOB	UNIF	WV	0 2
1097	LOAD	X	50	52	10.10-	16	5.05-	16	GLOB	UNIF	WV	0 2
1098	LOAD	Y	50	52	10.10-	09	5.05-	09	GLOB	UNIF	WV	0 2
1099	LOAD	Y	52	54	0.00-	37	5.05-	37	GLOB	UNIF	WV	0 2
1100	LOAD	Y	52	54	5.05-	37	5.05-	37	GLOB	UNIF	WV	0 2
1101	LOAD	Y	52	54	10.10-	37	5.05-	37	GLOB	UNIF	WV	0 2
1102	LOAD	X	54	50	0.00	16	5.05	16	GLOB	UNIF	WV	0 2
1103	LOAD	Y	54	50	0.00-	09	5.05-	09	GLOB	UNIF	WV	0 2
1104	LOAD	X	54	50	5.05	16	5.05	16	GLOB	UNIF	WV	0 2
1105	LOAD	Y	54	50	5.05-	09	5.05-	09	GLOB	UNIF	WV	0 2
1106	LOAD	X	54	50	10.10	16	5.05	17	GLOB	UNIF	WV	0 2
1107	LOAD	Y	54	50	10.10-	09	5.05-	10	GLOB	UNIF	WV	0 2
1108	LOAD	X	11	22	0.00	1	13.44	1	GLOB	UNIF	WV	0 2
1109	LOAD	Y	11	22	0.00-	21	13.44-	21	GLOB	UNIF	WV	0 2
1110	LOAD	Z	11	22	0.00	1	13.44	1	GLOB	UNIF	WV	0 2
1111	LOAD	X	11	22	13.44	1	13.44	1	GLOB	UNIF	WV	0 2
1112	LOAD	Y	11	22	13.44-	21	13.44-	22	GLOB	UNIF	WV	0 2
1113	LOAD	Z	11	22	13.44	1	13.44	1	GLOB	UNIF	WV	0 2
1114	LOAD	X	11	22	26.88	1	13.44	1	GLOB	UNIF	WV	0 2
1115	LOAD	Y	11	22	26.88-	22	13.44-	23	GLOB	UNIF	WV	0 2
1116	LOAD	Z	11	22	26.88	1	13.44	1	GLOB	UNIF	WV	0 2
1117	LOAD	X	11	24	0.00-	1	13.44-	1	GLOB	UNIF	WV	0 2
1118	LOAD	Y	11	24	0.00-	21	13.44-	21	GLOB	UNIF	WV	0 2
1119	LOAD	Z	11	24	0.00	1	13.44	1	GLOB	UNIF	WV	0 2
1120	LOAD	X	11	24	13.44-	1	13.44-	1	GLOB	UNIF	WV	0 2
1121	LOAD	Y	11	24	13.44-	21	13.44-	22	GLOB	UNIF	WV	0 2
1122	LOAD	Z	11	24	13.44	1	13.44	1	GLOB	UNIF	WV	0 2
1123	LOAD	X	11	24	26.88-	1	13.44-	1	GLOB	UNIF	WV	0 2
1124	LOAD	Y	11	24	26.88-	22	13.44-	23	GLOB	UNIF	WV	0 2
1125	LOAD	Z	11	24	26.88	1	13.44	1	GLOB	UNIF	WV	0 2
1126	LOAD	X	13	24	0.00	03	13.44	03	GLOB	UNIF	WV	0 2
1127	LOAD	Y	13	24	0.00-	13	13.44-	14	GLOB	UNIF	WV	0 2
1128	LOAD	Z	13	24	0.00-	08	13.44-	09	GLOB	UNIF	WV	0 2
1129	LOAD	X	13	24	13.44	03	13.44	03	GLOB	UNIF	WV	0 2
1130	LOAD	Y	13	24	13.44-	14	13.44-	15	GLOB	UNIF	WV	0 2
1131	LOAD	Z	13	24	13.44-	09	13.44-	09	GLOB	UNIF	WV	0 2
1132	LOAD	X	13	24	26.88	03	13.44	03	GLOB	UNIF	WV	0 2
1133	LOAD	Y	13	24	26.88-	15	13.44-	16	GLOB	UNIF	WV	0 2
1134	LOAD	Z	13	24	26.88-	09	13.44-	10	GLOB	UNIF	WV	0 2
1135	LOAD	X	13	26	0.00	03	13.44	03	GLOB	UNIF	WV	0 2
1136	LOAD	Y	13	26	0.00-	15	13.44-	14	GLOB	UNIF	WV	0 2
1137	LOAD	Z	13	26	0.00	07	13.44	07	GLOB	UNIF	WV	0 2
1138	LOAD	X	13	26	13.44	03	13.44	03	GLOB	UNIF	WV	0 2
1139	LOAD	Y	13	26	13.44-	14	13.44-	14	GLOB	UNIF	WV	0 2
1140	LOAD	Z	13	26	13.44	07	13.44	07	GLOB	UNIF	WV	0 2
1141	LOAD	X	13	26	26.88	03	13.44	03	GLOB	UNIF	WV	0 2
1142	LOAD	Y	13	26	26.88-	14	13.44-	14	GLOB	UNIF	WV	0 2
1143	LOAD	Z	13	26	26.88	07	13.44	07	GLOB	UNIF	WV	0 2
1144	LOAD	X	15	26	0.00-	03	13.44-	03	GLOB	UNIF	WV	0 2
1145	LOAD	Y	15	26	0.00-	15	13.44-	14	GLOB	UNIF	WV	0 2

1146	LOAD	Z	15	26	0.00	07	13.44	07	GLOB	UNIF	WV	0	2
1147	LOAD	X	15	26	13.44-	03	13.44-	03	GLOB	UNIF	WV	0	2
1148	LOAD	Y	15	26	13.44-	14	13.44-	14	GLOB	UNIF	WV	0	2
1149	LOAD	Z	15	26	13.44	07	13.44	07	GLOB	UNIF	WV	0	2
1150	LOAD	X	15	26	26.88-	03	13.44-	03	GLOB	UNIF	WV	0	2
1151	LOAD	Y	15	26	26.88-	14	13.44-	14	GLOB	UNIF	WV	0	2
1152	LOAD	Z	15	26	26.88	07	13.44	07	GLOB	UNIF	WV	0	2
1153	LOAD	X	15	22	0.00-	03	13.44-	03	GLOB	UNIF	WV	0	2
1154	LOAD	Y	15	22	0.00-	15	13.44-	14	GLOB	UNIF	WV	0	2
1155	LOAD	Z	15	22	0.00-	06	13.44-	09	GLOB	UNIF	WV	0	2
1156	LOAD	X	15	22	13.44-	03	13.44-	03	GLOB	UNIF	WV	0	2
1157	LOAD	Y	15	22	13.44-	14	13.44-	15	GLOB	UNIF	WV	0	2
1158	LOAD	Z	15	22	13.44-	09	13.44-	09	GLOB	UNIF	WV	0	2
1159	LOAD	X	15	22	26.88-	03	13.44-	03	GLOB	UNIF	WV	0	2
1160	LOAD	Y	15	22	26.88-	15	13.44-	16	GLOB	UNIF	WV	0	2
1161	LOAD	Z	15	22	26.88-	09	13.44-	10	GLOB	UNIF	WV	0	2
1162	LOAD	X	22	36	0.00-	1	18.20-	1	GLOB	UNIF	WV	0	2
1163	LOAD	Y	22	36	0.00-	29	18.20-	31	GLOB	UNIF	WV	0	2
1164	LOAD	Z	22	36	0.00	1	18.20	1	GLOB	UNIF	WV	0	2
1165	LOAD	X	22	36	18.20-	1	18.20-	1	GLOB	UNIF	WV	0	2
1166	LOAD	Y	22	36	18.20-	31	18.20-	34	GLOB	UNIF	WV	0	2
1167	LOAD	Z	22	36	18.20	1	18.20	1	GLOB	UNIF		0	2
1168	LOAD	X	22	36	36.39-	1	18.20-	1	GLOB	UNIF	WV	0	2
1169	LOAD	Y	22	36	36.39-	34	18.20-	38	GLOB	UNIF	WV	0	2
1170	LOAD	Z	22	36	36.39	1	18.20	1	GLOB	UNIF	WV	0	2
1171	LOAD	X	24	38	0.00	09	20.96	09	GLOB	UNIF	WV	0	2
1172	LOAD	Y	24	38	0.00-	12	20.96-	12	GLOB	UNIF	WV	0	2
1173	LOAD	Z	24	38	0.00	11	20.96	12	GLOB	UNIF	WV	0	2
1174	LOAD	X	24	38	20.96	09	20.96	09	GLOB	UNIF	WV	0	2
1175	LOAD	Y	24	38	20.96-	12	20.96-	12	GLOB	UNIF	WV	0	2
1176	LOAD	Z	24	38	20.96	12	20.96	12	GLOB	UNIF	WV	0	2
1177	LOAD	X	24	38	41.93	09	20.96	08	GLOB	UNIF	WV	0	2
1178	LOAD	Y	24	38	41.93-	12	20.96-	12	GLOB	UNIF	WV	0	2
1179	LOAD	Z	24	38	41.93	12	20.96	11	GLOB	UNIF	WV	0	2
1180	LOAD	X	26	34	0.00-	06	13.65-	07	GLOB	UNIF	WV	0	2
1181	LOAD	Y	26	34	0.00-	11	13.65-	13	GLOB	UNIF	WV	0	2
1182	LOAD	Z	26	34	0.00-	10	13.65-	11	GLOB	UNIF	WV	0	2
1183	LOAD	X	26	34	13.65-	07	13.65-	08	GLOB	UNIF	WV	0	2
1184	LOAD	Y	26	34	13.65-	13	13.65-	14	GLOB	UNIF	WV	0	2
1185	LOAD	Z	26	34	13.65-	11	13.65-	13	GLOB	UNIF	WV	0	2
1186	LOAD	X	26	34	27.29-	08	13.65-	09	GLOB	UNIF	WV	0	2
1187	LOAD	Y	26	34	27.29-	14	13.65-	16	GLOB	UNIF	WV	0	2
1188	LOAD	Z	26	34	27.29-	13	13.65-	14	GLOB	UNIF	WV	0	2
1189	LOAD	X	26	34	40.94-	09	13.65-	10	GLOB	UNIF	WV	0	2
1190	LOAD	Y	26	34	40.94-	16	13.65-	18	GLOB	UNIF	WV	0	2
1191	LOAD	Z	26	34	40.94-	14	13.65-	16	GLOB	UNIF	WV	0	2
1192	LOAD	X	36	49	0.00	02	11.86	02	GLOB	UNIF	WV	0	2
1193	LOAD	Y	36	49	0.00-	38	11.86-	42	GLOB	UNIF	WV	0	2
1194	LOAD	Z	36	49	0.00	1	11.86	02	GLOB	UNIF	WV	0	2
1195	LOAD	X	36	49	11.86	02	11.86	02	GLOB	UNIF	WV	0	2
1196	LOAD	Y	36	49	11.86-	42	11.86-	46	GLOB	UNIF	WV	0	2
1197	LOAD	Z	36	49	11.86	02	11.86	02	GLOB	UNIF	WV	0	2
1198	LOAD	X	36	49	23.72	02	11.86	02	GLOB	UNIF	WV	0	2
1199	LOAD	Y	36	49	23.72-	46	11.86-	53	GLOB	UNIF	WV	0	2
1200	LOAD	Z	36	49	23.72	02	11.86	02	GLOB	UNIF	WV	0	2
1201	LOAD	X	36	49	35.58	02	11.86	02	GLOB	UNIF	WV	0	2

1202	LOAD	Y	36	49	35.58-	53	11.86-	60	GLOB	UNIF	WV	0	2
1203	LOAD	Z	36	49	35.58	02	11.86	02	GLOB	UNIF	WV	0	2
1204	LOAD	X	38	51	0.00	06	9.29	07	GLOB	UNIF	WV	0	2
1205	LOAD	Y	38	51	0.00-	11	9.29-	13	GLOB	UNIF	WV	0	2
1206	LOAD	Z	38	51	0.00-	13	9.29-	15	GLOB	UNIF	WV	0	2
1207	LOAD	X	38	51	9.29	07	9.29	08	GLOB	UNIF	WV	0	2
1208	LOAD	Y	38	51	9.29-	13	9.29-	15	GLOB	UNIF	WV	0	2
1209	LOAD	Z	38	51	9.29-	15	9.29-	17	GLOB	UNIF	WV	0	2
1210	LOAD	X	38	51	18.57	08	9.29	09	GLOB	UNIF	WV	0	2
1211	LOAD	Y	38	51	18.57-	15	9.29-	17	GLOB	UNIF	WV	0	2
1212	LOAD	Z	38	51	18.57-	17	9.29-	19	GLOB	UNIF	WV	0	2
1213	LOAD	X	38	51	27.86	09	9.29	10	GLOB	UNIF	WV	0	2
1214	LOAD	Y	38	51	27.86-	17	9.29-	19	GLOB	UNIF	WV	0	2
1215	LOAD	Z	38	51	27.86-	19	9.29-	21	GLOB	UNIF	WV	0	2
1216	LOAD	X	38	51	37.14	10	9.29	11	GLOB	UNIF	WV	0	2
1217	LOAD	Y	38	51	37.14-	19	9.29-	22	GLOB	UNIF	WV	0	2
1218	LOAD	Z	38	51	37.14-	21	9.29-	24	GLOB	UNIF	WV	0	2
1219	LOAD	X	38	51	46.43	11	9.29	13	GLOB	UNIF	WV	0	2
1220	LOAD	Y	38	51	46.43-	22	9.29-	24	GLOB	UNIF	WV	0	2
1221	LOAD	Z	38	51	46.43-	24	9.29-	27	GLOB	UNIF	WV	0	2
1222	LOAD	X	34	53	0.00-	10	15.81-	11	GLOB	UNIF	WV	0	2
1223	LOAD	Y	34	53	0.00-	24	15.81-	27	GLOB	UNIF	WV	0	2
1224	LOAD	Z	34	53	0.00	16	15.81	17	GLOB	UNIF	WV	0	2
1225	LOAD	X	34	53	15.81-	11	15.81-	12	GLOB	UNIF	WV	0	2
1226	LOAD	Y	34	53	15.81-	27	15.81-	30	GLOB	UNIF	WV	0	2
1227	LOAD	Z	34	53	15.81	17	15.81	20	GLOB	UNIF	WV	0	2
1228	LOAD	X	34	53	31.62-	12	15.81-	13	GLOB	UNIF	WV	0	2
1229	LOAD	Y	34	53	31.62-	30	15.81-	33	GLOB	UNIF	WV	0	2
1230	LOAD	Z	34	53	31.62	20	15.81	22	GLOB	UNIF	WV	0	2
1231	LOAD	Y	55	58	0.00-	117	5.70-	130	GLOB	UNIF	WV	0	2
1232	LOAD	Y	55	58	5.70-	130	5.70-	146	GLOB	UNIF	WV	0	2
1233	LOAD	Y	55	58	11.40-	146	5.70-	163	GLOB	UNIF	WV	0	2
1234	LOAD	Y	55	58	17.10-	163	5.70-	185	GLOB	UNIF	WV	0	2
1235	LOAD	Y	55	58	22.80-	185	5.70-	210	GLOB	UNIF	WV	0	2
1236	LOAD	Y	58	61	0.00-	210	3.97-	229	GLOB	UNIF	WV	0	2
1237	LOAD	Y	58	61	3.97-	229	3.97-	248	GLOB	UNIF	WV	0	2
1238	LOAD	Y	58	61	7.95-	248	3.97-	275	GLOB	UNIF	WV	0	2
1239	LOAD	Y	56	59	0.00-	117	5.70-	130	GLOB	UNIF	WV	0	2
1240	LOAD	Y	56	59	5.70-	130	5.70-	146	GLOB	UNIF	WV	0	2
1241	LOAD	Y	56	59	11.40-	146	5.70-	163	GLOB	UNIF	WV	0	2
1242	LOAD	Y	56	59	17.10-	163	5.70-	185	GLOB	UNIF	WV	0	2
1243	LOAD	Y	56	59	22.80-	185	5.70-	210	GLOB	UNIF	WV	0	2
1244	LOAD	Y	59	64	0.00-	210	3.97-	229	GLOB	UNIF	WV	0	2
1245	LOAD	Y	59	64	3.97-	229	3.97-	248	GLOB	UNIF	WV	0	2
1246	LOAD	Y	59	64	7.95-	248	3.97-	275	GLOB	UNIF	WV	0	2
1247	LOAD	Y	57	60	0.00-	104	5.70-	116	GLOB	UNIF	WV	0	2
1248	LOAD	Y	57	60	5.70-	116	5.70-	129	GLOB	UNIF	WV	0	2
1249	LOAD	Y	57	60	11.40-	129	5.70-	144	GLOB	UNIF	WV	0	2
1250	LOAD	Y	57	60	17.10-	144	5.70-	163	GLOB	UNIF	WV	0	2
1251	LOAD	Y	57	60	22.80-	163	5.70-	183	GLOB	UNIF	WV	0	2
1252	LOAD	Y	60	70	0.00-	183	2.00-	192	GLOB	UNIF	WV	0	2
1253	LOAD	Y	60	70	2.00-	192	2.00-	201	GLOB	UNIF	WV	0	2
1254	LOAD	Y	60	70	4.00-	201	2.00-	209	GLOB	UNIF	WV	0	2
1255	LOAD	Y	70	67	0.00-	209	1.35-	215	GLOB	UNIF	WV	0	2
1256	LOAD	Y	70	67	1.35-	215	1.35-	223	GLOB	UNIF	WV	0	2
1257	LOAD	Y	70	67	2.71-	223	1.35-	231	GLOB	UNIF	WV	0	2

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1258 LOAD Y   58  59   0.00-   74   9.67-   74        GLOB UNIF   WV 0 2
1259 LOAD Y   58  59   9.67-   74   9.67-   74        GLOB UNIF   WV 0 2
1260 LOAD Y   58  59  19.33-   74   9.67-   74        GLOB UNIF   WV 0 2
1261 LOAD X   59  60   0.00    32   9.67    31        GLOB UNIF   WV 0 2
1262 LOAD Y   59  60   0.00-   19   9.67-   18        GLOB UNIF   WV 0 2
1263 LOAD X   59  60   9.67    31   9.67    30        GLOB UNIF   WV 0 2
1264 LOAD Y   59  60   9.67-   18   9.67-   17        GLOB UNIF   WV 0 2
1265 LOAD X   59  60  19.33    30   9.67    28        GLOB UNIF   WV 0 2
1266 LOAD Y   59  60  19.33-   17   9.67-   16        GLOB UNIF   WV 0 2
1267 LOAD X   60  58   0.00-   28   9.67-   30        GLOB UNIF   WV 0 2
1268 LOAD Y   60  58   0.00-   16   9.67-   17        GLOB UNIF   WV 0 2
1269 LOAD X   60  58   9.67-   30   9.67-   31        GLOB UNIF   WV 0 2
1270 LOAD Y   60  58   9.67-   17   9.67-   18        GLOB UNIF   WV 0 2
1271 LOAD X   60  58  19.33-   31   9.67-   32        GLOB UNIF   WV 0 2
1272 LOAD Y   60  58  19.33-   18   9.67-   19        GLOB UNIF   WV 0 2
1273 LOAD Y   59  61   0.00-   74   8.65-   81        GLOB UNIF   WV 0 2
1274 LOAD Y   59  61   8.65-   81   8.65-   88        GLOB UNIF   WV 0 2
1275 LOAD Y   59  61  17.29-   88   8.65-   97        GLOB UNIF   WV 0 2
1276 LOAD X   60  64   0.00    22   6.25    25        GLOB UNIF   WV 0 2
1277 LOAD Y   60  64   0.00-   26   6.25-   29        GLOB UNIF   WV 0 2
1278 LOAD Z   60  64   0.00-   23   6.25-   25        GLOB UNIF   WV 0 2
1279 LOAD X   60  64   6.25    25   6.25    27        GLOB UNIF   WV 0 2
1280 LOAD Y   60  64   6.25-   29   6.25-   32        GLOB UNIF   WV 0 2
1281 LOAD Z   60  64   6.25-   25   6.25-   28        GLOB UNIF   WV 0 2
1282 LOAD X   60  64  12.49    27   6.25    30        GLOB UNIF   WV 0 2
1283 LOAD Y   60  64  12.49-   32   6.25-   36        GLOB UNIF   WV 0 2
1284 LOAD Z   60  64  12.49-   28   6.25-   31        GLOB UNIF   WV 0 2
1285 LOAD X   60  64  18.74    30   6.25    33        GLOB UNIF   WV 0 2
1286 LOAD Y   60  64  18.74-   36   6.25-   39        GLOB UNIF   WV 0 2
1287 LOAD Z   60  64  18.74-   31   6.25-   34        GLOB UNIF   WV 0 2
1288 LOAD X   58  67   0.00-   25   7.69-   27        GLOB UNIF   WV 0 2
1289 LOAD Y   58  67   0.00-   30   7.69-   32        GLOB UNIF   WV 0 2
1290 LOAD Z   58  67   0.00    26   7.69    28        GLOB UNIF   WV 0 2
1291 LOAD X   58  67   7.69-   27   7.69-   28        GLOB UNIF   WV 0 2
1292 LOAD Y   58  67   7.69-   32   7.69-   34        GLOB UNIF   WV 0 2
1293 LOAD Z   58  67   7.69    28   7.69    29        GLOB UNIF   WV 0 2
1294 LOAD X   58  67  15.38-   28   7.69-   30        GLOB UNIF   WV 0 2
1295 LOAD Y   58  67  15.38-   34   7.69-   36        GLOB UNIF   WV 0 2
1296 LOAD Z   58  67  15.38    29   7.69    31        GLOB UNIF   WV 0 2
1297 LOAD Y   70  66   0.00-   38   2.02-   40        GLOB UNIF   WV 0 2
1298 LOAD Y   70  66   2.02-   40   2.02-   41        GLOB UNIF   WV 0 2
1299 LOAD Y   70  66   4.04-   41   2.02-   43        GLOB UNIF   WV 0 2
1300 LOAD Y   70  68   0.00-   38   2.02-   40        GLOB UNIF   WV 0 2
1301 LOAD Y   70  68   2.02-   40   2.02-   41        GLOB UNIF   WV 0 2
1302 LOAD Y   70  68   4.04-   41   2.02-   43        GLOB UNIF   WV 0 2
1303 LOADCN    3
1304 LOAD Z    1   4   0.00  -.557   6.06  -.557      GLOB UNIF   DL 0 3
1305 LOAD Z    4  16   0.00  -.557  32.44  -.557      GLOB UNIF   DL 0 3
1306 LOAD Z   16  28   0.00  -.403  32.44  -.403      GLOB UNIF   DL 0 3
1307 LOAD Z   28  43   0.00  -.403  32.44  -.403      GLOB UNIF   DL 0 3
1308 LOAD Z   43  55   0.00  -.403   4.59  -.403      GLOB UNIF   DL 0 3
1309 LOAD Z    2   5   0.00  -.557   6.06  -.557      GLOB UNIF   DL 0 3
1310 LOAD Z    5  17   0.00  -.557  32.44  -.557      GLOB UNIF   DL 0 3
1311 LOAD Z   17  29   0.00  -.403  32.44  -.403      GLOB UNIF   DL 0 3
1312 LOAD Z   29  44   0.00  -.403  32.44  -.403      GLOB UNIF   DL 0 3
1313 LOAD Z   44  56   0.00  -.403   4.59  -.403      GLOB UNIF   DL 0 3
```

1314	LOAD	Z	3	6	0.00	-.557	6.07	-.557	GLOB	UNIF	DL	0	3
1315	LOAD	Z	6	18	0.00	-.557	32.44	-.557	GLOB	UNIF	DL	0	3
1316	LOAD	Z	18	30	0.00	-.403	32.58	-.403	GLOB	UNIF	DL	0	3
1317	LOAD	Z	30	45	0.00	-.403	36.13	-.403	GLOB	UNIF	DL	0	3
1318	LOAD	Z	45	57	0.00	-.403	4.58	-.403	GLOB	UNIF	DL	0	3
1319	LOAD	Z	10	22	0.00	-.183	32.44	-.183	GLOB	UNIF	DL	0	3
1320	LOAD	Z	22	34	0.00	-.183	32.44	-.183	GLOB	UNIF	DL	0	3
1321	LOAD	Z	34	40	0.00	-.371	14.18	-.371	GLOB	UNIF	DL	0	3
1322	LOAD	Z	40	49	0.00	-.371	14.26	-.371	GLOB	UNIF	DL	0	3
1323	LOAD	Z	49	55	0.00	-.371	4.56	-.371	GLOB	UNIF	DL	0	3
1324	LOAD	Z	12	24	0.00	-.183	32.44	-.183	GLOB	UNIF	DL	0	3
1325	LOAD	Z	24	36	0.00	-.183	32.44	-.183	GLOB	UNIF	DL	0	3
1326	LOAD	Z	36	41	0.00	-.371	14.18	-.371	GLOB	UNIF	DL	0	3
1327	LOAD	Z	41	51	0.00	-.371	14.26	-.371	GLOB	UNIF	DL	0	3
1328	LOAD	Z	51	56	0.00	-.371	4.56	-.371	GLOB	UNIF	DL	0	3
1329	LOAD	Z	14	26	0.00	-.183	32.44	-.183	GLOB	UNIF	DL	0	3
1330	LOAD	Z	26	38	0.00	-.183	32.58	-.183	GLOB	UNIF	DL	0	3
1331	LOAD	Z	38	42	0.00	-.371	15.03	-.371	GLOB	UNIF	DL	0	3
1332	LOAD	Z	42	53	0.00	-.371	21.26	-.371	GLOB	UNIF	DL	0	3
1333	LOAD	Z	53	57	0.00	-.371	4.56	-.371	GLOB	UNIF	DL	0	3
1334	LOAD	Z	10	11	1.71	-.081	25.58	-.081	GLOB	UNIF	DL	0	3
1335	LOAD	Z	11	12	1.71	-.081	25.58	-.081	GLOB	UNIF	DL	0	3
1336	LOAD	Z	12	13	1.71	-.081	25.58	-.081	GLOB	UNIF	DL	0	3
1337	LOAD	Z	13	14	1.71	-.081	25.58	-.081	GLOB	UNIF	DL	0	3
1338	LOAD	Z	14	15	1.71	-.081	25.58	-.081	GLOB	UNIF	DL	0	3
1339	LOAD	Z	15	10	1.71	-.081	25.58	-.081	GLOB	UNIF	DL	0	3
1340	LOAD	Z	11	13	1.41	-.047	26.17	-.047	GLOB	UNIF	DL	0	3
1341	LOAD	Z	13	15	1.41	-.047	26.17	-.047	GLOB	UNIF	DL	0	3
1342	LOAD	Z	15	11	1.41	-.047	26.17	-.047	GLOB	UNIF	DL	0	3
1343	LOAD	Z	22	23	1.71	-.081	20.96	-.081	GLOB	UNIF	DL	0	3
1344	LOAD	Z	23	24	1.71	-.081	20.96	-.081	GLOB	UNIF	DL	0	3
1345	LOAD	Z	24	25	1.71	-.081	20.96	-.081	GLOB	UNIF	DL	0	3
1346	LOAD	Z	25	26	1.71	-.081	20.96	-.081	GLOB	UNIF	DL	0	3
1347	LOAD	Z	26	27	1.71	-.081	20.96	-.081	GLOB	UNIF	DL	0	3
1348	LOAD	Z	27	22	1.71	-.081	20.96	-.081	GLOB	UNIF	DL	0	3
1349	LOAD	Z	23	25	1.41	-.047	21.55	-.047	GLOB	UNIF	DL	0	3
1350	LOAD	Z	25	27	1.41	-.047	21.55	-.047	GLOB	UNIF	DL	0	3
1351	LOAD	Z	27	23	1.41	-.047	21.55	-.047	GLOB	UNIF	DL	0	3
1352	LOAD	Z	34	35	1.71	-.057	16.35	-.057	GLOB	UNIF	DL	0	3
1353	LOAD	Z	35	36	1.71	-.057	16.35	-.057	GLOB	UNIF	DL	0	3
1354	LOAD	Z	36	37	1.71	-.057	16.35	-.057	GLOB	UNIF	DL	0	3
1355	LOAD	Z	37	38	1.71	-.057	26.80	-.057	GLOB	UNIF	DL	0	3
1356	LOAD	Z	38	39	1.71	-.057	26.80	-.057	GLOB	UNIF	DL	0	3
1357	LOAD	Z	39	34	1.71	-.057	16.35	-.057	GLOB	UNIF	DL	0	3
1358	LOAD	Z	35	37	1.71	-.043	16.35	-.043	GLOB	UNIF	DL	0	3
1359	LOAD	Z	37	39	1.71	-.043	16.34	-.043	GLOB	UNIF	DL	0	3
1360	LOAD	Z	39	35	1.71	-.043	16.35	-.043	GLOB	UNIF	DL	0	3
1361	LOAD	Z	49	50	1.71	-.072	11.73	-.072	GLOB	UNIF	DL	0	3
1362	LOAD	Z	50	51	1.71	-.072	11.73	-.072	GLOB	UNIF	DL	0	3
1363	LOAD	Z	51	52	1.71	-.072	11.73	-.072	GLOB	UNIF	DL	0	3
1364	LOAD	Z	52	53	1.71	-.072	11.73	-.072	GLOB	UNIF	DL	0	3
1365	LOAD	Z	53	54	1.71	-.072	11.73	-.072	GLOB	UNIF	DL	0	3
1366	LOAD	Z	54	49	1.71	-.072	11.73	-.072	GLOB	UNIF	DL	0	3
1367	LOAD	Z	50	52	1.71	-.057	11.73	-.057	GLOB	UNIF	DL	0	3
1368	LOAD	Z	52	54	1.71	-.057	11.72	-.057	GLOB	UNIF	DL	0	3
1369	LOAD	Z	54	50	1.71	-.057	11.73	-.057	GLOB	UNIF	DL	0	3

1370	LOAD	Z	11	22	1.71	-.072	36.90	-.072	GLOB	UNIF	DL	0	3
1371	LOAD	Z	11	24	1.71	-.072	36.90	-.072	GLOB	UNIF	DL	0	3
1372	LOAD	Z	13	24	1.71	-.072	36.89	-.072	GLOB	UNIF	DL	0	3
1373	LOAD	Z	13	26	1.71	-.072	36.90	-.072	GLOB	UNIF	DL	0	3
1374	LOAD	Z	15	26	1.71	-.072	36.90	-.072	GLOB	UNIF	DL	0	3
1375	LOAD	Z	15	22	1.71	-.072	36.89	-.072	GLOB	UNIF	DL	0	3
1376	LOAD	Z	22	36	2.42	-.112	49.76	-.112	GLOB	UNIF	DL	0	3
1377	LOAD	Z	24	38	2.42	-.112	54.06	-.112	GLOB	UNIF	DL	0	3
1378	LOAD	Z	26	34	2.42	-.112	44.76	-.112	GLOB	UNIF	DL	0	3
1379	LOAD	Z	36	49	2.42	-.112	42.61	-.112	GLOB	UNIF	DL	0	3
1380	LOAD	Z	38	51	2.42	-.112	51.89	-.112	GLOB	UNIF	DL	0	3
1381	LOAD	Z	34	53	2.42	-.112	42.60	-.112	GLOB	UNIF	DL	0	3
1382	LOAD	Z	4	7	0.00	-.148	2.40	-.148	GLOB	UNIF	DL	0	3
1383	LOAD	Z	7	10	0.00	-.148	2.50	-.148	GLOB	UNIF	DL	0	3
1384	LOAD	Z	5	8	0.00	-.148	2.40	-.148	GLOB	UNIF	DL	0	3
1385	LOAD	Z	8	12	0.00	-.148	2.50	-.148	GLOB	UNIF	DL	0	3
1386	LOAD	Z	6	9	0.00	-.148	2.40	-.148	GLOB	UNIF	DL	0	3
1387	LOAD	Z	9	14	0.00	-.148	2.50	-.148	GLOB	UNIF	DL	0	3
1388	LOAD	Z	16	19	0.00	-.148	2.40	-.148	GLOB	UNIF	DL	0	3
1389	LOAD	Z	19	22	0.00	-.148	2.50	-.148	GLOB	UNIF	DL	0	3
1390	LOAD	Z	17	20	0.00	-.148	2.40	-.148	GLOB	UNIF	DL	0	3
1391	LOAD	Z	20	24	0.00	-.148	2.50	-.148	GLOB	UNIF	DL	0	3
1392	LOAD	Z	18	21	0.00	-.148	2.40	-.148	GLOB	UNIF	DL	0	3
1393	LOAD	Z	21	26	0.00	-.148	2.50	-.148	GLOB	UNIF	DL	0	3
1394	LOAD	Z	28	31	0.00	-.148	2.40	-.148	GLOB	UNIF	DL	0	3
1395	LOAD	Z	31	34	0.00	-.148	2.50	-.148	GLOB	UNIF	DL	0	3
1396	LOAD	Z	29	32	0.00	-.148	2.40	-.148	GLOB	UNIF	DL	0	3
1397	LOAD	Z	32	36	0.00	-.148	2.50	-.148	GLOB	UNIF	DL	0	3
1398	LOAD	Z	30	33	0.00	-.148	2.40	-.148	GLOB	UNIF	DL	0	3
1399	LOAD	Z	33	38	0.00	-.148	2.50	-.148	GLOB	UNIF	DL	0	3
1400	LOAD	Z	43	46	0.00	-.148	2.40	-.148	GLOB	UNIF	DL	0	3
1401	LOAD	Z	46	49	0.00	-.148	2.50	-.148	GLOB	UNIF	DL	0	3
1402	LOAD	Z	44	47	0.00	-.148	2.40	-.148	GLOB	UNIF	DL	0	3
1403	LOAD	Z	47	51	0.00	-.148	2.50	-.148	GLOB	UNIF	DL	0	3
1404	LOAD	Z	45	48	0.00	-.148	2.40	-.148	GLOB	UNIF	DL	0	3
1405	LOAD	Z	48	53	0.00	-.148	2.50	-.148	GLOB	UNIF	DL	0	3
1406	LOAD	Z	55	58	0.00	-.403	23.00	-.403	GLOB	UNIF	DL	0	3
1407	LOAD	Z	55	58	23.00	-.464	5.50	-.464	GLOB	UNIF	DL	0	3
1408	LOAD	Z	58	61	0.00	-.464	15.00	-.464	GLOB	UNIF	DL	0	3
1409	LOAD	Z	61	71	0.00	-.464	15.00	-.464	GLOB	UNIF	DL	0	3
1410	LOAD	Z	56	59	0.00	-.403	23.00	-.403	GLOB	UNIF	DL	0	3
1411	LOAD	Z	56	59	23.00	-.464	5.50	-.464	GLOB	UNIF	DL	0	3
1412	LOAD	Z	59	64	0.00	-.464	15.00	-.464	GLOB	UNIF	DL	0	3
1413	LOAD	Z	64	72	0.00	-.464	15.00	-.464	GLOB	UNIF	DL	0	3
1414	LOAD	Z	57	60	0.00	-.403	23.00	-.403	GLOB	UNIF	DL	0	3
1415	LOAD	Z	57	60	23.00	-.464	5.50	-.464	GLOB	UNIF	DL	0	3
1416	LOAD	Z	60	70	0.00	-.464	6.00	-.464	GLOB	UNIF	DL	0	3
1417	LOAD	Z	70	67	0.00	-.464	9.00	-.464	GLOB	UNIF	DL	0	3
1418	LOAD	Z	67	76	0.00	-.464	4.00	-.464	GLOB	UNIF	DL	0	3
1419	LOAD	Z	76	75	0.00	-.464	11.00	-.464	GLOB	UNIF	DL	0	3
1420	LOAD	Z	58	59	1.71	-.065	25.58	-.065	GLOB	UNIF	DL	0	3
1421	LOAD	Z	59	60	1.71	-.065	25.58	-.065	GLOB	UNIF	DL	0	3
1422	LOAD	Z	60	58	1.71	-.065	25.58	-.065	GLOB	UNIF	DL	0	3
1423	LOAD	Z	59	61	1.71	-.065	29.23	-.065	GLOB	UNIF	DL	0	3
1424	LOAD	Z	60	64	1.71	-.065	29.23	-.065	GLOB	UNIF	DL	0	3
1425	LOAD	Z	58	67	1.71	-.065	29.23	-.065	GLOB	UNIF	DL	0	3

```
1426 LOAD Z    70  66    1.59  -.019  10.27  -.019        GLOB UNIF   DL 0 3
1427 LOAD Z    70  68    1.59  -.019  10.27  -.019        GLOB UNIF   DL 0 3
1428 LOAD Z    76  77    1.71  -.050  14.78  -.050        GLOB UNIF   DL 0 3
1429 LOAD Z    76  78    1.71  -.050  14.78  -.050        GLOB UNIF   DL 0 3
1430 LOAD Z    61  62    0.00  -.055   1.50  -.055        GLOB UNIF   DL 0 3
1431 LOAD Z    62  63    0.00  -.055  20.00  -.055        GLOB UNIF   DL 0 3
1432 LOAD Z    63  64    0.00  -.055   4.50  -.055        GLOB UNIF   DL 0 3
1433 LOAD Z    64  65    0.00  -.055   8.75  -.055        GLOB UNIF   DL 0 3
1434 LOAD Z    65  67    0.00  -.055  20.25  -.055        GLOB UNIF   DL 0 3
1435 LOAD Z    67  69    0.00  -.055  20.25  -.055        GLOB UNIF   DL 0 3
1436 LOAD Z    69  61    0.00  -.055   8.75  -.055        GLOB UNIF   DL 0 3
1437 LOAD Z    63  65    0.00  -.024   7.50  -.024        GLOB UNIF   DL 0 3
1438 LOAD Z    65  66    0.00  -.024  17.61  -.024        GLOB UNIF   DL 0 3
1439 LOAD Z    66  67    0.00  -.024  10.00  -.024        GLOB UNIF   DL 0 3
1440 LOAD Z    67  68    0.00  -.024  10.00  -.024        GLOB UNIF   DL 0 3
1441 LOAD Z    68  69    0.00  -.024  17.61  -.024        GLOB UNIF   DL 0 3
1442 LOAD Z    69  62    0.00  -.024   7.50  -.024        GLOB UNIF   DL 0 3
1443 LOAD Z    71  73    0.00  -.055   3.00  -.055        GLOB UNIF   DL 0 3
1444 LOAD Z    71  72    0.00  -.055  29.00  -.055        GLOB UNIF   DL 0 3
1445 LOAD Z    72  74    0.00  -.055   3.00  -.055        GLOB UNIF   DL 0 3
1446 LOAD Z    71  81    0.00  -.055   5.00  -.055        GLOB UNIF   DL 0 3
1447 LOAD Z    71  77    0.00  -.055  25.11  -.055        GLOB UNIF   DL 0 3
1448 LOAD Z    77  83    0.00  -.055   5.00  -.055        GLOB UNIF   DL 0 3
1449 LOAD Z    72  82    0.00  -.055   5.00  -.055        GLOB UNIF   DL 0 3
1450 LOAD Z    72  78    0.00  -.055  25.11  -.055        GLOB UNIF   DL 0 3
1451 LOAD Z    78  84    0.00  -.055   5.00  -.055        GLOB UNIF   DL 0 3
1452 LOAD Z    77  79    0.00  -.055   3.00  -.055        GLOB UNIF   DL 0 3
1453 LOAD Z    77  75    0.00  -.055  14.50  -.055        GLOB UNIF   DL 0 3
1454 LOAD Z    75  78    0.00  -.055  14.50  -.055        GLOB UNIF   DL 0 3
1455 LOAD Z    78  80    0.00  -.055   3.00  -.055        GLOB UNIF   DL 0 3
1456 LOAD Z    71  75    0.00  -.016  29.00  -.016        GLOB UNIF   DL 0 3
1457 LOAD Z    72  75    0.00  -.016  29.00  -.016        GLOB UNIF   DL 0 3
1458 LOADCN    4
1459 LOAD Y    40  49      89    242                      GLOB CONC   BOAT LNG
1460 LOAD Y    41  51      89    242                      GLOB CONC   BOAT LNG
1461 LOAD Y    55  58     242    406                      GLOB CONC   STAIRS
1462 LOAD Y    56  59     242    406                      GLOB CONC   STAIRS
1463 LOADCN    5
1464 LOAD Z    61  62             -13                     GLOB UNIF   ADD DEAD
1465 LOAD Z    62  63             -13                     GLOB UNIF   ADD DEAD
1466 LOAD Z    63  64             -13                     GLOB UNIF   ADD DEAD
1467 LOAD Z    64  65             -13                     GLOB UNIF   ADD DEAD
1468 LOAD Z    65  67             -13                     GLOB UNIF   ADD DEAD
1469 LOAD Z    67  69             -13                     GLOB UNIF   ADD DEAD
1470 LOAD Z    69  61             -13                     GLOB UNIF   ADD DEAD
1471 LOAD Z    61  71      15    -793                     GLOB CONC   ADD DEAD
1472 LOAD Z    64  72      15    -793                     GLOB CONC   ADD DEAD
1473 LOAD Z    76  75      15    -793                     GLOB CONC   ADD DEAD
1474 LOADCN    6
1475 LOAD Z    61  62             -86                     GLOB UNIF   LIVE LDS
1476 LOAD Z    62  63             -86                     GLOB UNIF   LIVE LDS
1477 LOAD Z    63  64             -86                     GLOB UNIF   LIVE LDS
1478 LOAD Z    64  65             -86                     GLOB UNIF   LIVE LDS
1479 LOAD Z    65  67             -86                     GLOB UNIF   LIVE LDS
1480 LOAD Z    67  69             -86                     GLOB UNIF   LIVE LDS
1481 LOAD Z    69  61             -86                     GLOB UNIF   LIVE LDS
```

```
1482 LOAD Z   61  71    15    =4083                                 GLOB CONC   LIVE LDS
1483 LOAD Z   64  72    15    =4083                                 GLOB CONC   LIVE LDS
1484 LOAD Z   76  75    15    =4083                                 GLOB CONC   LIVE LDS
1485 LDCOMB
1486 LDCOMB   7 100.   2 100.   3=100.   4 100.   5                              MAX TENS
1487 LDCOMB   8 100.   1 100.   3 100.   4 100.   5 100.   6                     MAX COMP
1488 END
```

```
JYJOCME.   04/27/76. *UNITED COMPUTING* 67, APEX/SL , 9.0.25

09.53.23$DATAEDT,CM100,T200,RT.
09.53.23$FL       64      0.000
09.53.23$AC3400C880023,27771OCCC )B
09.53.23, 04/27/76,JYJOCME
09.53.24$FL     3392      0.000
09.53.24,GET,DATAEDT(LIBRARY)
09.53.24,READY =    DATAEDT
09.53.24,GET,TAPE9=S771C1.
09.53.26,READY =    S771C1
09.53.26,RFL,31000.
09.53.26$FL     4096      0.001         0          0.
09.53.26$FT      225          2
09.53.26$FL    12800      0.001
09.53.26,MAP,OFF.
09.53.26,REDUCE.
09.53.26$FL      256      0.003
09.53.27,DATAEDT.
09.53.27$FLS   12800      0.003
09.53.27$FLR   12800      0.084       126          5
09.53.28$FLR   17408      0.103         4          1
09.53.28,FL REQUIRED TO LOAD        30332B ( 12506)
09.53.28,FL REQUIRED TO EXECUTE     17600B (  8064)
09.53.28$FL    17408      0.107
09.53.32,STOP
09.53.32,REPLACE,TAPE10=S771C2.
09.53.34,READY =    S771C2
09.53.34,COST.
09.53.34$FL     8064      3.265       870         51.
09.53.34$FT      212          1
09.53.35.              SERVICE UNITS=      14.9
09.53.35.             JOB COST=$        3.75
09.53.35$FL    12288      3.284         7          5
09.53.35,EXIT.
09.53.35$JT00   2368      3.284
09.53.35.      *FL*  *CPU SEC. *DISC PRUS* DISC ACC
09.53.35.*P.F. PRUS*P.F. ACC *TAPE PRUS* TAPE ACC
```

6000 REMOTE BATCH

UNITED COMPUTING 67. APEX/8L. 8.0.25

17.27.02.   04/26/76.

JVJZCET

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                    *                                                    *
                    *                    SEALDAP-2                       *
                    *                                                    *
                    *     DEVELOPED BY SYNERGUN TECHNOLOGY, INC.         *
                    *              HOUSTON, TEXAS                        *
                    *             RELEASE 2 MOD 11                       *
                    *               MARCH 1976                           *
                    *                                                    *
                    ******************************************************
                                                                                          PAGE   1

                       1    1    2    2    3    3    4    4    5    5    6    6    7    7    8
 LINE NO. 1....5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0

      1  COEF   41.0  1.0   0.0   1.0
      2  END
      3  3-PILE ACMR STRUCTURE -- U.S. NAVY  (36-IN. DIAMETER PILINGS) -- C.CHERN
      4  STRAN   1 900 10 20 5011  22700 10 20 5011 CD 11     00 3                  10 3
      5  END
      6  GRID     14   20               FULL
      7  XSPC      0    8   17   25   33   58   91  570  603  628  636  644  653  661
      8  YSPC    142  140  138  136  133  130  125  120  115  110  105  100   90   80   70
      9           60   40   20    0
     10  YSRF    142  141  139  136  133  119  105  105  119  133  136  139  141  149
     11  SURF    921  920  867  778  674  397  195   33  222  519  646  769  867  921
     12   142    921                                                            921
     13   140    883  895                                                  884  883
     14   138    845  845  834                                        749  797  845
     15   136    798  812  799  778                              646  709  765  798
     16   133    746  763  754  722  674                    519  590  669  719  746
     17   130    694  718  702  671  641                    494  557  622  676  694
     18   125    624  639  635  611  578                    444  506  562  602  624
     19   120    566  570  570  554  528                    406  459  504  537  566
     20   115    508  518  512  498  478  374          209  367  412  453  488  508
     21   110    456  469  469  455  440  348          196  337  376  414  442  456
     22   105    417  424  427  415  401  324  195   33  183  307  343  377  399  417
     23   100    380  387  389  382  370  303  187   35  172  284  315  344  365  380
     24    90    318  327  327  323  313  266  171   39  153  240  267  288  307  318
     25    80    274  279  281  280  272  233  159   41  135  209  231  248  262  274
     26    70    238  243  245  245  241  210  149   42  124  186  203  216  229  238
     27    60    210  218  219  219  214  191  140   44  114  165  181  193  204  210
     28    40    175  180  182  182  180  165  127   44  101  139  151  160  169  175
     29    20    156  160  162  163  162  150  119   45   93  126  136  144  151  156
     30     0    149  153  155  156  156  146  116   45   91  122  130  138  144  149
     31  SURF
     32   142
     33   140
     34   138
     35   136
     36   133
     37   130
     38   125
     39   120
     40   115
     41   110
     42   105
```

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LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0
                  1    1    2    2    3    3    4    4    5    5    6    6    7    7    8

    43  100
    44   90
    45   80
    46   70
    47   60
    48   40
    49   20
    50    0
    51  WIND  1     90 3610 1590 100   173 15    ALL
    52          2  290 3610 1490 100   173 15    ALL
    53  END
    54  SECT
    55  SECT PILING1    TUB 18830 5536600 2768300 2768300   3600 1750
    56  SECT PILING2    TUB 13646 4125028 2062514 2062514   3600 1250
    57  SECT JKTLEG1    TUB  6205 2420592 1210296 1210296   4000  500
    58  SECT JKTLEG2    TUB 12566 5029702 2514851 2514851   4100 1000
    59  SECT BRACES1    TUB  3804  357408  178704  178704   2000  625
    60  SECT BRACES2    TUB  2749  210632  105316  105316   1800  500
    61  SECT BRACES3    TUB  2435  146386   73193   73193   1600  500
    62  SECT BRACES4    TUB  1605   74560   37280   37280   1400  375
    63  SECT BRACES5    TUB  1920   72328   36164   36164   1275  500
    64  SECT BRACES6    TUB  1458   55882   27941   27941   1275  375
    65  SECT BRACES7    TUB   558    5630    2815    2815  6.625  280
    66  SECT WISHBON    PRT  5600 3000000 3000000 3000000   1000            500
    67  SECT SUBTLEG    TUB 13646 4125028 2062514 2062514   3600 1250
    68  SECT W18X50     WFC  1620     125   80200    4020    750  570 1800  358   50
    69  SECT W8X24      WFC   706      34    8250    1820    650  398  793  245   50
    70  SECT W6X15      WFC   456      11    3010     967    600  269  600  235   50
    71  GRUP
    72  GRUP P10 PILING1    3600   1750   2900 1160 3600 1
    73  GRUP P20 PILING2    3600   1250   2900 1160 3600 1
    74  GRUP J11 JKTLEG1    4000    500   2900 1160 3600 1
    75  GRUP J12 JKTLEG2    4100   1000   2900 1160 3600 1
    76  GRUP BR1 BRACES1    2000    625   2900 1160 3600 2 483   8    8
    77  GRUP BR2 BRACES2    1800    500   2900 1160 3600 2 302   8    8
    78  GRUP BR3 BRACES3    1600    500   2900 1160 3600 2 302   8    8
    79  GRUP BR4 BRACES4    1400    375   2900 1160 3600 2 283   8    8
    80  GRUP BR5 BRACES5    1275    500   2900 1160 3600 2 302   8    8
    81  GRUP BR6 BRACES6    1275    375   2900 1160 3600 2 302   8    8
    82  GRUP BR7 BRACES7   6.625    280   2900 1160 3600 2 318   8    8
    83  GRUP WBN WISHBON                  2900 1160 3600 2                  01
    84  GRUP STL SUBTLEG    3600   1250   2900 1160 3600 1
    85  GRUP W18 W18X50                   2900 1160 3600 1                  01
    86  GRUP W08 W8X24                    2900 1160 3600 1                  01
    87  GRUP W06 W6X15                    2900 1160 3600 1                  01
    88  MEMBER
    89  MEMBER     1    4 P10                                                       F  0000 1
    90  MEMBER     4   16 P10                                                       F  0000 1
    91  MEMBER    16   28 P20                                                       F  0000 1
    92  MEMBER    28   43 P20                                                       F  0000 1
```

LINE NO.							
93	MEMBER	43	55	P20	F	0000	1
94	MEMBER	2	5	P10	F	0000	2
95	MEMBER	5	17	P10	F	0000	2
96	MEMBER	17	29	P20	F	0000	2
97	MEMBER	29	44	P20	F	0000	2
98	MEMBER	44	56	P20	F	0000	2
99	MEMBER	3	6	P10	F	0000	3
100	MEMBER	6	18	P10	F	0000	3
101	MEMBER	18	30	P20	F	0000	3
102	MEMBER	30	45	P20	F	0000	3
103	MEMBER	45	57	P20	F	0000	3
104	MEMBER	10	22	JL1	F	4000	
105	MEMBER	22	34	JL1	F	4000	
106	MEMBER	34	40	JL2	F	4100	
107	MEMBER	40	49	JL2	F	4100	
108	MEMBER	49	55	JL2	F	4100	
109	MEMBER	12	24	JL1	F	4000	
110	MEMBER	24	36	JL1	F	4000	
111	MEMBER	36	41	JL2	F	4100	
112	MEMBER	41	51	JL2	F	4100	
113	MEMBER	51	56	JL2	F	4100	
114	MEMBER	14	26	JL1	F	4000	
115	MEMBER	26	38	JL1	F	4000	
116	MEMBER	38	42	JL2	F	4100	
117	MEMBER	42	53	JL2	F	4100	
118	MEMBER	53	57	JL2	F	4100	
119	MEMBER	10	11	FB2		1800	
120	MEMBER	11	12	BB2		1800	
121	MEMBER	12	13	BB2		1800	
122	MEMBER	13	14	BB2		1800	
123	MEMBER	14	15	BB2		1800	
124	MEMBER	15	10	BB2		1800	
125	MEMBER	11	13	BB4		1400	
126	MEMBER	13	15	BB4		1400	
127	MEMBER	15	11	BB4		1400	
128	MEMBER	22	23	BB2		1800	
129	MEMBER	23	24	BB2		1800	
130	MEMBER	24	25	BB2		1800	
131	MEMBER	25	26	BB2		1800	
132	MEMBER	26	27	BB2		1800	
133	MEMBER	27	22	BB2		1800	
134	MEMBER	23	25	BB4		1400	
135	MEMBER	25	27	BB4		1400	
136	MEMBER	27	23	BB4		1400	
137	MEMBER	34	35	BB5		1275	
138	MEMBER	35	36	BB5		1275	
139	MEMBER	36	37	BB5		1275	
140	MEMBER	37	38	BB5		1275	
141	MEMBER	38	39	BB5		1275	
142	MEMBER	39	34	BB5		1275	

LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0

143	MEMBER	35	37	BB6			1275
144	MEMBER	37	39	BB6			1275
145	MEMBER	39	35	BB6			1275
146	MEMBER	49	50	BB3			1600
147	MEMBER	50	51	BB3			1600
148	MEMBER	51	52	BB3			1600
149	MEMBER	52	53	BB3			1600
150	MEMBER	53	54	BB3			1600
151	MEMBER	54	49	BB3			1600
152	MEMBER	50	52	BB5			1275
153	MEMBER	52	54	BB5			1275
154	MEMBER	54	50	BB5			1275
155	MEMBER	11	22	BB3			1600
156	MEMBER	11	24	BB3			1600
157	MEMBER	13	24	BB3			1600
158	MEMBER	13	26	BB3			1600
159	MEMBER	15	26	BB3			1600
160	MEMBER	15	22	BB3			1600
161	MEMBER	22	36	BB1			2000
162	MEMBER	24	38	BB1			2000
163	MEMBER	26	34	BB1			2000
164	MEMBER	36	49	BB1			2000
165	MEMBER	38	51	BB1			2000
166	MEMBER	34	53	BB1			2000
167	MEMBER	4	7	WBN	1111	F	0000
168	MEMBER	7	10	WBN		F	0000
169	MEMBER	5	8	WBN	1111	F	0000
170	MEMBER	8	12	WBN		F	0000
171	MEMBER	6	9	WBN	1111	F	0000
172	MEMBER	9	14	WBN		F	0000
173	MEMBER	16	19	WBN	1111	F	0000
174	MEMBER	19	22	WBN		F	0000
175	MEMBER	17	20	WBN	1111	F	0000
176	MEMBER	20	24	WBN		F	0000
177	MEMBER	18	21	WBN	1111	F	0000
178	MEMBER	21	26	WBN		F	0000
179	MEMBER	28	31	WBN	1111	F	0000
180	MEMBER	31	34	WBN		F	0000
181	MEMBER	29	32	WBN	1111	F	0000
182	MEMBER	32	36	WBN		F	0000
183	MEMBER	30	33	WBN	1111	F	0000
184	MEMBER	33	38	WBN		F	0000
185	MEMBER	43	46	WBN	1111	F	0000
186	MEMBER	46	49	WBN		F	0000
187	MEMBER	44	47	WBN	1111	F	0000
188	MEMBER	47	51	WBN		F	0000
189	MEMBER	45	48	WBN	1111	F	0000
190	MEMBER	48	53	WBN		F	0000
191	MEMBER	55	58	STL			3600
192	MEMBER	58	61	STL			3600

```
                    1    1    2    2    3    3    4    4    5    5    6    6    7    7    8
LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0

  193  MEMBER   61   71 STL                                                   3600
  194  MEMBER   56   59 STL                                                   3600
  195  MEMBER   59   64 STL                                                   3600
  196  MEMBER   64   72 STL                                                   3600
  197  MEMBER   57   60 STL                                                   3600
  198  MEMBER   60   70 STL                                                   3600
  199  MEMBER   70   67 STL                                                   3600
  200  MEMBER   67   76 STL                                                   3600
  201  MEMBER   76   75 STL                                                   3600
  202  MEMBER   58   59 BR5                                                   1275
  203  MEMBER   59   60 BR5                                                   1275
  204  MEMBER   60   58 BR5                                                   1275
  205  MEMBER   59   61 BR5                                                   1275
  206  MEMBER   60   64 BR5                                                   1275
  207  MEMBER   58   67 BR5                                                   1275
  208  MEMBER   70   66 BR7                                                  6.625
  209  MEMBER   70   68 BR7                                                  6.625
  210  MEMBER   76   77 BR6                                                   1275
  211  MEMBER   76   78 BR6                                                   1275
  212  MEMBER   61   62 W18                                                   0000
  213  MEMBER   62   63 W18                                                   0000
  214  MEMBER   63   64 W18                                                   0000
  215  MEMBER   64   65 W18                                                   0000
  216  MEMBER   65   67 W18                                                   0000
  217  MEMBER   67   69 W18                                                   0000
  218  MEMBER   69   61 W18                                                   0000
  219  MEMBER   63   65 W08                                                   0000
  220  MEMBER   65   66 W08                                                   0000
  221  MEMBER   66   67 W08                                                   0000
  222  MEMBER   67   68 W08                                                   0000
  223  MEMBER   68   69 W08                                                   0000
  224  MEMBER   69   62 W08                                                   0000
  225  MEMBER   71   73 W18                                                   0000
  226  MEMBER   71   72 W18                                                   0000
  227  MEMBER   72   74 W18                                                   0000
  228  MEMBER   71   81 W18                                                   0000
  229  MEMBER   71   77 W18                                                   0000
  230  MEMBER   77   83 W18                                                   0000
  231  MEMBER   72   82 W18                                                   0000
  232  MEMBER   72   78 W18                                                   0000
  233  MEMBER   78   84 W18                                                   0000
  234  MEMBER   77   79 W18                                                   0000
  235  MEMBER   77   75 W18                                                   0000
  236  MEMBER   75   78 W18                                                   0000
  237  MEMBER   78   80 W18                                                   0000
  238  MEMBER   71   75 W06                                                   0000
  239  MEMBER   72   75 W06                                                   0000
  240  JOINT
  241  JOINT     1    2987  -1725   -600              111   PILING A
  242  JOINT     2   -2987  -1725   -600              111   PILING B
```

LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0

243	JOINT	3	300	3449	-600	111	PILING C
244	JOINT	4	2910	-1684	0		MUDLINE
245	JOINT	5	-2910	-1684	0		MUDLINE
246	JOINT	6	0	3359	0		MUDLINE
247	JOINT	7	2900	-1924	0		MUDLINE
248	JOINT	8	-2900	-1924	0		MUDLINE
249	JOINT	9	0	3599	0		MUDLINE
250	JOINT	10	2900	-1674	0		MUDLINE
251	JOINT	11	0	-1674	0		MUDLINE
252	JOINT	12	-29	-1674	0		MUDLINE
253	JOINT	13	-1450	837	0		MUDLINE
254	JOINT	14	0	3349	0		MUDLINE
255	JOINT	15	1450	837	0		MUDLINE
256	JOINT	16	2447	-1417	3200		1 LEVEL
257	JOINT	17	-2447	-1417	3200		1 LEVEL
258	JOINT	18	0	2825	3200		1 LEVEL
259	JOINT	19	2438	-1657	3200		1 LEVEL
260	JOINT	20	-2438	-1657	3200		1 LEVEL
261	JOINT	21	0	3065	3200		1 LEVEL
262	JOINT	22	2438	-1407	3200		1 LEVEL
263	JOINT	23	0	-1407	3200		1 LEVEL
264	JOINT	24	-2438	-1407	3200		1 LEVEL
265	JOINT	25	-1219	704	3200		1 LEVEL
266	JOINT	26	0	2815	3200		1 LEVEL
267	JOINT	27	1219	704	3200		1 LEVEL
268	JOINT	28	1987	-1151	6400		2 LEVEL
269	JOINT	29	-1987	-1151	6400		2 LEVEL
270	JOINT	30	0	3437	6400		2 LEVEL
271	JOINT	31	1977	-1391	6400		2 LEVEL
272	JOINT	32	-1977	-1391	6400		2 LEVEL
273	JOINT	33	0	3677	6400		2 LEVEL
274	JOINT	34	1977	-1141	6400		2 LEVEL
275	JOINT	35	0	-1141	6400		2 LEVEL
276	JOINT	36	-1977	-1141	6400		2 LEVEL
277	JOINT	37	-988	571	6400		2 LEVEL
278	JOINT	38	0	3427	6400		2 LEVEL
279	JOINT	39	988	571	6400		2 LEVEL
280	JOINT	40	1774	-1040	7800		BOAT LDG
281	JOINT	41	-1774	-1040	7800		BOAT LDG
282	JOINT	42	0	2880	7800		BOAT LDG
283	JOINT	43	1525	-885	9600		3 LEVEL
284	JOINT	44	-1525	-885	9600		3 LEVEL
285	JOINT	45	0	1759	9600		3 LEVEL
286	JOINT	46	1515	-1125	9600		3 LEVEL
287	JOINT	47	-1515	-1125	9600		3 LEVEL
288	JOINT	48	0	1999	9600		3 LEVEL
289	JOINT	49	1515	-875	9600		3 LEVEL
290	JOINT	50	0	-875	9600		3 LEVEL
291	JOINT	51	-1515	-875	9600		3 LEVEL
292	JOINT	52	-757	437	9600		3 LEVEL

LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0

293	JOINT	53	0	1749	9600	3 LEVEL
294	JOINT	54	757	437	9600	3 LEVEL
295	JOINT	55	1450	-837	10050	WP LEVEL
296	JOINT	56	-1450	-837	10050	WP LEVEL
297	JOINT	57	0	1674	10050	WP LEVEL
298	JOINT	58	1450	-837	12900	ST BRACE
299	JOINT	59	-1450	-837	12900	ST BRACE
300	JOINT	60	0	1674	12900	ST BRACE
301	JOINT	61	1450	-837	14400	EOT DECK
302	JOINT	62	1000	-837	14400	EOT DECK
303	JOINT	63	-1000	-837	14400	EOT DECK
304	JOINT	64	-1450	-837	14400	EOT DECK
305	JOINT	65	-1000	-837	14400	EOT DECK
306	JOINT	66	-1000	1674	14400	EOT DECK
307	JOINT	67	0	1674	14400	EOT DECK
308	JOINT	68	1000	1674	14400	EOT DECK
309	JOINT	69	1000	-837	14400	EOT DECK
310	JOINT	70	0	1674	13500	BRACE PT
311	JOINT	71	1450	-837	15900	TOP DECK
312	JOINT	72	-1450	-837	15900	TOP DECK
313	JOINT	73	1750	-837	15900	TOP DECK
314	JOINT	74	-1750	-837	15900	TOP DECK
315	JOINT	75	0	1674	15900	TOP DECK
316	JOINT	76	0	1674	14800	BRACE PT
317	JOINT	77	1450	1674	15900	TOP DECK
318	JOINT	78	-1450	1674	15900	TOP DECK
319	JOINT	79	1750	1674	15900	TOP DECK
320	JOINT	80	-1750	1674	15900	TOP DECK
321	JOINT	81	1450	-1337	15900	TOP DECK
322	JOINT	82	-1450	-1337	15900	TOP DECK
323	JOINT	83	1450	2174	15900	TOP DECK
324	JOINT	84	-1450	2174	15900	TOP DECK
325	END					

**** COEFFICIENT TABLE REPORT ****

DIAMETER IN	NORMAL DRAG COEF	TANG DRAG COEF	MASS COEF
41.000	1.0000	0.0000	1.0000

```
5-PILE ACMR STRUCTURE -- U.S. NAVY  (36-IN. DIAMETER PILING) -- C.CHERN

    INPUT UNITS
            ....ENGLISH

    OUTPUT UNITS
            ....ENGLISH
```

****** WAVE POSITION SUMMARY REPORT ******

LOAD CONDITION 1

WAVE ANGLE = 90.00

TRIAL NO.	DIST. TO CREST FT	PHASE ANG.-WAVE-TO-STRUC. (DEG)	SHEAR KIPS X	SHEAR KIPS Y	SHEAR KIPS RSLNT	MUDLINE MOMENT FT-KIPS X	MUDLINE MOMENT FT-KIPS Y	MUDLINE MOMENT FT-KIPS RSLNT	VERTICAL FORCE KIPS Z
1	-20.0	10.89	.5	728.9	728.9	-60287.	155.	60287.	-.4
2	-15.0	8.17	-1.9	751.8	751.8	-63523.	-164.	63523.	2.5
3	-10.0	5.45	-2.8	759.7	759.7	-64911.	-288.	64912.	4.0
4	-5.0	2.72	-2.7	757.5	757.5	-65027.	-273.	65028.	4.4
5	0.0	-0.00	-2.2	751.6	751.6	-64799.	-193.	64800.	4.2
6	5.0	-2.72	-1.6	729.0	729.0	-62502.	-102.	62502.	3.8
7	10.0	-5.45	-1.0	709.7	709.7	-60829.	-16.	60829.	3.7

**** L O A D   S U M M A R Y   R E P O R T ****

WAVE NUMBER = 1   WAVE DIRECTION = 90.000

X SHEAR FORCE =	-2.7349	KIPS
Y SHEAR FORCE =	757.4846	KIPS
RESULTANT SHEAR FORCE =	757.4895	KIPS
X MUDLINE MOMENT =	-65027.4929	FT-KIPS
Y MUDLINE MOMENT =	-273.2359	FT-KIPS
RESULTANT MUDLINE MOMENT =	65028.0670	FT-KIPS
Z VERTICAL FORCE =	4.3589	KIPS

**** WAVE POSITION SUMMARY REPORT ****

LOAD CONDITION 2

WAVE ANGLE = 270.00

TRIAL NO.	DIST. TO CREST FT	PHASE ANG. WAVE-TO-STRUC. (DEG)	SHEAR KIPS X	SHEAR KIPS Y	SHEAR KIPS RSLNT	MUDLINE MOMENT FT-KIPS X	MUDLINE MOMENT FT-KIPS Y	MUDLINE MOMENT FT-KIPS RSLNT	VERTICAL FORCE KIPS Z
1	-20.0	10.89	.1	-733.7	733.7	60886.	-79.	60886.	-1.1
2	-15.0	8.17	-.2	-748.9	748.9	62924.	-120.	62924.	-.4
3	-10.0	5.45	.3	-761.3	761.3	64825.	-52.	64825.	-.4
4	-5.0	2.72	.8	-757.1	757.1	64668.	37.	64668.	-.7
5	0.0	-0.00	1.4	-757.1	757.1	65243.	126.	65244.	-.9
6	5.0	-2.72	1.9	-739.4	739.4	63568.	194.	63568.	-.9
7	10.0	-5.45	1.8	-717.2	717.2	61498.	193.	61498.	-.4

**** L O A D   S U M M A R Y   R E P O R T ****

WAVE NUMBER =   2   WAVE DIRECTION =270.000

X SHEAR FORCE =	1.4179	KIPS
Y SHEAR FORCE =	-757.1200	KIPS
RESULTANT SHEAR FORCE =	757.1213	KIPS
X MUDLINE MOMENT =	65243.4242	FT-KIPS
Y MUDLINE MOMENT =	126.2453	FT-KIPS
RESULTANT MUDLINE MOMENT =	65243.5463	FT-KIPS
Z VERTICAL FORCE =	-.9087	KIPS

**** D E A D   L O A D   R E P O R T ****

LOAD CONDITION   3   MEAN WATER DEPTH = 123.500 FT

STRUCTURE DEAD LOAD =   -835.8654 KIPS

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                     *************************************************
                     *                                               *
                     *                 SEALOAD-2                     *
                     *                                               *
                     *   DEVELOPED BY SYNERCOM TECHNOLOGY, INC.      *
                     *             HOUSTON, TEXAS                    *
                     *           RELEASE 2 MOD 11                    *
                     *              MARCH 1976                       *
                     *                                               *
                     *************************************************
                                                                                          PAGE   1

                    1    1    2    2    3    3    4    4    5    5    6    6    7    7    8
LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0

   1   SECT
   2   SECT PILING1   TUB 18830 5536600 2768300 2768300   3600 1750
   3   SECT PILING2   TUB 13646 4125028 2062514 2062514   3600 1250
   4   SECT JKTLEG1   TUB  6205 2420592 1210296 1210296   4000  500
   5   SECT JKTLEG2   TUB 12566 5029702 2514851 2514851   4100 1000
   6   SECT BRACES1   TUB  3804  357408  178704  178704   2000  625
   7   SECT BRACES2   TUB  2749  210632  105316  105316   1800  500
   8   SECT BRACES3   TUB  2435  146386   73193   73193   1600  500
   9   SECT BRACES4   TUB  1605   74560   37280   37280   1400  375
  10   SECT BRACES5   TUB  1324   72328   36164   36164   1275  500
  11   SECT BRACES6   TUB  1458   55882   27941   27941   1275  375
  12   SECT BRACES7   TUB   558    5630    2815    2815  6.625  280
  13   SECT WISHBON   PRI  5000 3000000 3000000 3000000   1000         500
  14   SECT SUSTLEG   TUB 13646 4125028 2062514 2062514   3600 1250
  15   SECT W18X50    WFC  1620     125   80200    4020    750  570  1800  358   50
  16   SECT W8X24     WFC   706      34    8250    1820    650  398   793  245   50
  17   SECT W6X15     WFC   456      11    3010     967    600  269   600  235   50
  18   GRUP
  19   GRUP P10 PILING1   3600  1750  2900 1160 3600 1
  20   GRUP P20 PILING2   3600  1250  2900 1160 3600 1
  21   GRUP JL1 JKTLEG1   4000   500  2900 1160 3600 1
  22   GRUP JL2 JKTLEG2   4100  1000  2900 1160 3600 1
  23   GRUP BR1 BRACES1   2000   625  2900 1160 3600 2 483   8    8
  24   GRUP BR2 BRACES2   1800   500  2900 1160 3600 2 342   8    8
  25   GRUP BR3 BRACES3   1600   500  2900 1160 3600 2 342   8    8
  26   GRUP BR4 BRACES4   1400   375  2900 1160 3600 2 283   8    8
  27   GRUP BR5 BRACES5   1275   500  2900 1160 3600 2 342   8    8
  28   GRUP BR6 BRACES6   1275   375  2900 1160 3600 2 342   8    8
  29   GRUP BR7 BRACES7  6.625   280  2900 1160 3600 2 318   8    8
  30   GRUP WBN WISHBON               2900 1160 3600 2                 01
  31   GRUP STL SUSTLEG   3600  1250  2900 1160 3600 1
  32   GRUP W18 W18X50                2900 1160 3600 1                 01
  33   GRUP W08 W8X24                 2900 1160 3600 1                 01
  34   GRUP W06 W6X15                 2900 1160 3600 1                 01
  35   MEMBER
  36   MEMBER    1   4 P10                                                         F  0000 1
  37   MEMBER    4  16 P10                                                         F  0000 1
  38   MEMBER   16  28 P20                                                         F  0000 1
  39   MEMBER   28  43 P20                                                         F  0000 1
  40   MEMBER   43  55 P20                                                         F  0000 1
  41   MEMBER    2   5 P10                                                         F  0000 2
  42   MEMBER    5  17 P10                                                         F  0000 2
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                      1    1    2    2    3    3    4    4    5    5    6    6    7    7    8
LINE NO.  1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0

   43   MEMBER   17   29 P20                                                         F  0000 2
   44   MEMBER   20   44 P20                                                         F  0000 2
   45   MEMBER   44   56 P20                                                         F  0000 2
   46   MEMBER    3    6 P10                                                         F  0000 3
   47   MEMBER    6   18 P10                                                         F  0000 3
   48   MEMBER   18   30 P20                                                         F  0000 3
   49   MEMBER   30   45 P20                                                         F  0000 3
   50   MEMBER   45   57 P20                                                         F  0000 3
   51   MEMBER   10   22 JL1                                                         F  4000
   52   MEMBER   22   34 JL1                                                         F  4000
   53   MEMBER   34   40 JL2                                                         F  4100
   54   MEMBER   40   49 JL2                                                         F  4100
   55   MEMBER   49   55 JL2                                                         F  4100
   56   MEMBER   12   24 JL1                                                         F  4000
   57   MEMBER   24   36 JL1                                                         F  4000
   58   MEMBER   36   41 JL2                                                         F  4100
   59   MEMBER   41   51 JL2                                                         F  4100
   60   MEMBER   51   56 JL2                                                         F  4100
   61   MEMBER   14   26 JL1                                                         F  4000
   62   MEMBER   26   38 JL1                                                         F  4000
   63   MEMBER   38   42 JL2                                                         F  4100
   64   MEMBER   42   53 JL2                                                         F  4100
   65   MEMBER   53   57 JL2                                                         F  4100
   66   MEMBER   10   11 BR2                                                            1800
   67   MEMBER   11   12 BR2                                                            1800
   68   MEMBER   12   13 BR2                                                            1800
   69   MEMBER   13   14 BR2                                                            1800
   70   MEMBER   14   15 BR2                                                            1800
   71   MEMBER   15   10 BR2                                                            1800
   72   MEMBER   11   13 BR4                                                            1400
   73   MEMBER   13   15 BR4                                                            1400
   74   MEMBER   15   11 BR4                                                            1400
   75   MEMBER   22   23 BR2                                                            1800
   76   MEMBER   23   24 BR2                                                            1800
   77   MEMBER   24   25 BR2                                                            1800
   78   MEMBER   25   26 BR2                                                            1800
   79   MEMBER   26   27 BR2                                                            1800
   80   MEMBER   27   22 BR2                                                            1800
   81   MEMBER   23   25 BR4                                                            1400
   82   MEMBER   25   27 BR4                                                            1400
   83   MEMBER   27   23 BR4                                                            1400
   84   MEMBER   34   35 BR5                                                            1275
   85   MEMBER   35   36 BR5                                                            1275
   86   MEMBER   36   37 BR5                                                            1275
   87   MEMBER   37   38 BR5                                                            1275
   88   MEMBER   38   39 BR5                                                            1275
   89   MEMBER   39   34 BR5                                                            1275
   90   MEMBER   35   37 BR6                                                            1275
   91   MEMBER   37   39 BR6                                                            1275
   92   MEMBER   39   35 BR6                                                            1275
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LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0

      93  MEMBER   49  50 BR3                                                   1600
      94  MEMBER   50  51 BR3                                                   1600
      95  MEMBER   51  52 BR3                                                   1600
      96  MEMBER   52  53 BR3                                                   1600
      97  MEMBER   53  54 BR3                                                   1600
      98  MEMBER   54  49 BR3                                                   1600
      99  MEMBER   50  52 BR5                                                   1275
     100  MEMBER   52  54 BR5                                                   1275
     101  MEMBER   54  50 BR5                                                   1275
     102  MEMBER   11  22 BR3                                                   1600
     103  MEMBER   11  24 BR3                                                   1600
     104  MEMBER   13  24 BR3                                                   1600
     105  MEMBER   13  26 BR3                                                   1600
     106  MEMBER   15  26 BR3                                                   1600
     107  MEMBER   15  22 BR3                                                   1600
     108  MEMBER   22  36 BR1                                                   2000
     109  MEMBER   24  38 BR1                                                   2000
     110  MEMBER   26  34 BR1                                                   2000
     111  MEMBER   36  49 BR1                                                   2000
     112  MEMBER   38  51 BR1                                                   2000
     113  MEMBER   34  53 BR1                                                   2000
     114  MEMBER    4   7 WBN     1111                                        F 0000
     115  MEMBER    7  10 WBN                                                 F 0000
     116  MEMBER    5   8 WBN     1111                                        F 0000
     117  MEMBER    8  12 WBN                                                 F 0000
     118  MEMBER    6   9 WBN     1111                                        F 0000
     119  MEMBER    9  14 WBN                                                 F 0000
     120  MEMBER   16  19 WBN     1111                                        F 0000
     121  MEMBER   19  22 WBN                                                 F 0000
     122  MEMBER   17  20 WBN     1111                                        F 0000
     123  MEMBER   20  24 WBN                                                 F 0000
     124  MEMBER   18  21 WBN     1111                                        F 0000
     125  MEMBER   21  26 WBN                                                 F 0000
     126  MEMBER   28  31 WBN     1111                                        F 0000
     127  MEMBER   31  34 WBN                                                 F 0000
     128  MEMBER   29  32 WBN     1111                                        F 0000
     129  MEMBER   32  36 WBN                                                 F 0000
     130  MEMBER   30  33 WBN     1111                                        F 0000
     131  MEMBER   33  38 WBN                                                 F 0000
     132  MEMBER   43  46 WBN     1111                                        F 0000
     133  MEMBER   46  49 WBN                                                 F 0000
     134  MEMBER   44  47 WBN     1111                                        F 0000
     135  MEMBER   47  51 WBN                                                 F 0000
     136  MEMBER   45  48 WBN     1111                                        F 0000
     137  MEMBER   48  53 WBN                                                 F 0000
     138  MEMBER   55  58 STL                                                   3600
     139  MEMBER   58  61 STL                                                   3600
     140  MEMBER   61  71 STL                                                   3600
     141  MEMBER   56  59 STL                                                   3600
     142  MEMBER   59  64 STL                                                   3600
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                     1    1    2    2    3    3    4    4    5    5    6    6    7    7    8
LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0

    143  MEMBER   64  72 STL                                                      3600
    144  MEMBER   57  60 STL                                                      3600
    145  MEMBER   60  70 STL                                                      3600
    146  MEMBER   70  67 STL                                                      3600
    147  MEMBER   67  76 STL                                                      3600
    148  MEMBER   76  75 STL                                                      3600
    149  MEMBER   58  59 BR5                                                      1275
    150  MEMBER   59  60 BR5                                                      1275
    151  MEMBER   60  58 BR5                                                      1275
    152  MEMBER   59  61 BR5                                                      1275
    153  MEMBER   60  64 BR5                                                      1275
    154  MEMBER   58  67 BR5                                                      1275
    155  MEMBER   70  66 BR7                                                     6.625
    156  MEMBER   70  68 BR7                                                     6.625
    157  MEMBER   76  77 BR6                                                      1275
    158  MEMBER   76  78 BR6                                                      1275
    159  MEMBER   61  62 W18                                                      0000
    160  MEMBER   62  63 W18                                                      0000
    161  MEMBER   63  64 W18                                                      0000
    162  MEMBER   64  65 W18                                                      0000
    163  MEMBER   65  67 W18                                                      0000
    164  MEMBER   67  69 W18                                                      0000
    165  MEMBER   69  61 W18                                                      0000
    166  MEMBER   63  65 W08                                                      0000
    167  MEMBER   65  66 W08                                                      0000
    168  MEMBER   66  67 W08                                                      0000
    169  MEMBER   67  68 W08                                                      0000
    170  MEMBER   68  69 W08                                                      0000
    171  MEMBER   69  62 W08                                                      0000
    172  MEMBER   71  73 W18                                                      0000
    173  MEMBER   71  72 W18                                                      0000
    174  MEMBER   72  74 W18                                                      0000
    175  MEMBER   71  81 W18                                                      0000
    176  MEMBER   71  77 W18                                                      0000
    177  MEMBER   77  83 W18                                                      0000
    178  MEMBER   72  82 W18                                                      0000
    179  MEMBER   72  78 W18                                                      0000
    180  MEMBER   78  84 W18                                                      0000
    181  MEMBER   77  79 W18                                                      0000
    182  MEMBER   77  75 W18                                                      0000
    183  MEMBER   75  78 W18                                                      0000
    184  MEMBER   78  80 W18                                                      0000
    185  MEMBER   71  75 W06                                                      0000
    186  MEMBER   72  75 W06                                                      0000
    187  JOINT
    188  JOINT     1    2987  -1725   -600                       111    PILING A
    189  JOINT     2   -2987  -1725   -600                       111    PILING B
    190  JOINT     3     000   3449   -600                       111    PILING C
    191  JOINT     4    2910  -1684    0                                MUDLINE
    192  JOINT     5   -2910  -1684    0                                MUDLINE
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LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0
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193	JOINT	6	0	3359	0	MUDLINE
194	JOINT	7	2900	-1924	0	MUDLINE
195	JOINT	8	-2900	-1924	0	MUDLINE
196	JOINT	9	0	3599	0	MUDLINE
197	JOINT	10	2900	-1674	0	MUDLINE
198	JOINT	11	0	-1674	0	MUDLINE
199	JOINT	12	-29	-1674	0	MUDLINE
200	JOINT	13	-1450	837	0	MUDLINE
201	JOINT	14	0	3349	0	MUDLINE
202	JOINT	15	1450	837	0	MUDLINE
203	JOINT	16	2447	-1417	3200	1 LEVEL
204	JOINT	17	-2447	-1417	3200	1 LEVEL
205	JOINT	18	0	2825	3200	1 LEVEL
206	JOINT	19	2438	-1657	3200	1 LEVEL
207	JOINT	20	-2438	-1657	3200	1 LEVEL
208	JOINT	21	0	3065	3200	1 LEVEL
209	JOINT	22	2438	-1407	3200	1 LEVEL
210	JOINT	23	0	-1407	3200	1 LEVEL
211	JOINT	24	-2438	-1407	3200	1 LEVEL
212	JOINT	25	-1219	704	3200	1 LEVEL
213	JOINT	26	0	2815	3200	1 LEVEL
214	JOINT	27	1219	704	3200	1 LEVEL
215	JOINT	28	1987	-1151	6400	2 LEVEL
216	JOINT	29	-1987	-1151	6400	2 LEVEL
217	JOINT	30	0	3437	6400	2 LEVEL
218	JOINT	31	1977	-1391	6400	2 LEVEL
219	JOINT	32	-1977	-1391	6400	2 LEVEL
220	JOINT	33	0	3677	6400	2 LEVEL
221	JOINT	34	1977	-1141	6410	2 LEVEL
222	JOINT	35	0	-1141	6400	2 LEVEL
223	JOINT	36	-1977	-1141	6400	2 LEVEL
224	JOINT	37	-988	571	6400	2 LEVEL
225	JOINT	38	0	3427	6400	2 LEVEL
226	JOINT	39	988	571	6400	2 LEVEL
227	JOINT	40	1774	-1040	7800	BOAT LDG
228	JOINT	41	-1774	-1040	7800	BOAT LDG
229	JOINT	42	0	2880	7800	BOAT LDG
230	JOINT	43	1525	-885	9600	3 LEVEL
231	JOINT	44	-1525	-885	9600	3 LEVEL
232	JOINT	45	0	1759	9600	3 LEVEL
233	JOINT	46	1515	-1125	9600	3 LEVEL
234	JOINT	47	-1515	-1125	9600	3 LEVEL
235	JOINT	48	0	1999	9600	3 LEVEL
236	JOINT	49	1515	-875	9600	3 LEVEL
237	JOINT	50	0	-875	9600	3 LEVEL
238	JOINT	51	-1515	-875	9600	3 LEVEL
239	JOINT	52	-757	437	9600	3 LEVEL
240	JOINT	53	0	1749	9600	3 LEVEL
241	JOINT	54	757	437	9600	3 LEVEL
242	JOINT	55	1450	-837	10050	WP LEVEL

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LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0
 243  JOINT   56  -1450   -837  10050                        WP LEVEL
 244  JOINT   57      0   1674  10050                        WP LEVEL
 245  JOINT   58   1450   -837  12900                        ST BRACE
 246  JOINT   59  -1450   -837  12900                        ST BRACE
 247  JOINT   60      0   1674  12900                        ST BRACE
 248  JOINT   61   1450   -837  14400                        FOT DECK
 249  JOINT   62   1000   -837  14400                        FOT DECK
 250  JOINT   63  -1000   -837  14400                        FOT DECK
 251  JOINT   64  -1450   -837  14400                        FOT DECK
 252  JOINT   65  -1000   -087  14400                        FOT DECK
 253  JOINT   66  -1000   1674  14400                        FOT DECK
 254  JOINT   67      0   1674  14400                        FOT DECK
 255  JOINT   68   1000   1674  14400                        FOT DECK
 256  JOINT   69   1000   -087  14400                        FOT DECK
 257  JOINT   70      0   1674  13500                        BRACE PT
 258  JOINT   71   1450   -837  15900                        TOP DECK
 259  JOINT   72  -1450   -837  15900                        TOP DECK
 260  JOINT   73   1750   -837  15900                        TOP DECK
 261  JOINT   74  -1750   -837  15900                        TOP DECK
 262  JOINT   75      0   1674  15900                        TOP DECK
 263  JOINT   76      0   1674  14800                        BRACE PT
 264  JOINT   77   1450   1674  15900                        TOP DECK
 265  JOINT   78  -1450   1674  15900                        TOP DECK
 266  JOINT   79   1750   1674  15900                        TOP DECK
 267  JOINT   80  -1750   1674  15900                        TOP DECK
 268  JOINT   81   1450  -1337  15900                        TOP DECK
 269  JOINT   82  -1450  -1337  15900                        TOP DECK
 270  JOINT   83   1450   2174  15900                        TOP DECK
 271  JOINT   84  -1450   2174  15900                        TOP DECK
 272  LOAD
 273  LOADCN   1
 274  LOAD Y  43 55    4.08    345                          GLOB CONC    WN 1 1
 275  LOAD X  43 55                         4.08-244106 GLOB MOMT    WN 1 1
 276  LOAD Y  44 56    4.08    345                          GLOB CONC    WN 1 1
 277  LOAD X  44 56                         4.08-244106 GLOB MOMT    WN 1 1
 278  LOAD Y  45 57    4.07    345                          GLOB CONC    WN 1 1
 279  LOAD X  45 57                         4.07-244106 GLOB MOMT    WN 1 1
 280  LOAD Y  43 55    4.08   1111                          GLOB CONC    WN 2 1
 281  LOAD X  43 55                         4.08-653247 GLOB MOMT    WN 2 1
 282  LOAD Y  44 56    4.08   1111                          GLOB CONC    WN 2 1
 283  LOAD X  44 56                         4.08-653247 GLOB MOMT    WN 2 1
 284  LOAD Y  45 57    4.07   1111                          GLOB CONC    WN 2 1
 285  LOAD X  45 57                         4.07-653247 GLOB MOMT    WN 2 1
 286  LOAD X  10 22    0.00      1  10.81     1             GLOB UNIF    WV 0 1
 287  LOAD Y  10 22    0.00     47  10.81    48             GLOB UNIF    WV 0 1
 288  LOAD Z  10 22    0.00-    04  10.81-   04             GLOB UNIF    WV 0 1
 289  LOAD X  10 22   10.81      1  10.81     1             GLOB UNIF    WV 0 1
 290  LOAD Y  10 22   10.81     48  10.81    50             GLOB UNIF    WV 0 1
 291  LOAD Z  10 22   10.81-    04  10.81-   04             GLOB UNIF    WV 0 1
 292  LOAD X  10 22   21.63      1  10.81     1             GLOB UNIF    WV 0 1
```

LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0

293	LOAD	Y	10	22	21.63	50	10.81	53	GLOB	UNIF	WV 0	1
294	LOAD	Z	10	22	21.63-	04	10.81-	04	GLOB	UNIF	WV 0	1
295	LOAD	X	22	34	0.00	1	10.81	1	GLOB	UNIF	WV 0	1
296	LOAD	Y	22	34	0.00	53	10.81	57	GLOB	UNIF	WV 0	1
297	LOAD	Z	22	34	0.00-	04	10.81-	05	GLOB	UNIF	WV 0	1
298	LOAD	X	22	34	10.81	1	10.81	1	GLOB	UNIF	WV 0	1
299	LOAD	Y	22	34	10.81	57	10.81	64	GLOB	UNIF	WV 0	1
300	LOAD	Z	22	34	10.81-	05	10.81-	05	GLOB	UNIF	WV 0	1
301	LOAD	X	22	34	21.63	1	10.81	1	GLOB	UNIF	WV 0	1
302	LOAD	Y	22	34	21.63	64	10.81	71	GLOB	UNIF	WV 0	1
303	LOAD	Z	22	34	21.63-	05	10.81-	06	GLOB	UNIF	WV 0	1
304	LOAD	X	34	40	0.00	1	4.73	1	GLOB	UNIF	WV 0	1
305	LOAD	Y	34	40	0.00	73	4.73	77	GLOB	UNIF	WV 0	1
306	LOAD	Z	34	40	0.00-	05	4.73-	05	GLOB	UNIF	WV 0	1
307	LOAD	X	34	40	4.73	1	4.73	1	GLOB	UNIF	WV 0	1
308	LOAD	Y	34	40	4.73	77	4.73	82	GLOB	UNIF	WV 0	1
309	LOAD	Z	34	40	4.73-	05	4.73-	06	GLOB	UNIF	WV 0	1
310	LOAD	X	34	40	9.45	1	4.73	1	GLOB	UNIF	WV 0	1
311	LOAD	Y	34	40	9.45	82	4.73	88	GLOB	UNIF	WV 0	1
312	LOAD	Z	34	40	9.45-	06	4.73-	06	GLOB	UNIF	WV 0	1
313	LOAD	X	40	49	0.00	1	6.09	1	GLOB	UNIF	WV 0	1
314	LOAD	Y	40	49	0.00	88	6.09	96	GLOB	UNIF	WV 0	1
315	LOAD	Z	40	49	0.00-	08	6.09-	09	GLOB	UNIF	WV 0	1
316	LOAD	X	40	49	6.09	1	6.09	1	GLOB	UNIF	WV 0	1
317	LOAD	Y	40	49	6.09	96	6.09	106	GLOB	UNIF	WV 0	1
318	LOAD	Z	40	49	6.09-	09	6.09-	09	GLOB	UNIF	WV 0	1
319	LOAD	X	40	49	12.17	1	6.09	1	GLOB	UNIF	WV 0	1
320	LOAD	Y	40	49	12.17	106	6.09	118	GLOB	UNIF	WV 0	1
321	LOAD	Z	40	49	12.17-	09	6.09-	11	GLOB	UNIF	WV 0	1
322	LOAD	X	49	55	0.00	1	1.52	1	GLOB	UNIF	WV 0	1
323	LOAD	Y	49	55	0.00	118	1.52	121	GLOB	UNIF	WV 0	1
324	LOAD	Z	49	55	0.00-	10	1.52-	10	GLOB	UNIF	WV 0	1
325	LOAD	X	49	55	1.52	1	1.52	1	GLOB	UNIF	WV 0	1
326	LOAD	Y	49	55	1.52	121	1.52	125	GLOB	UNIF	WV 0	1
327	LOAD	Z	49	55	1.52-	10	1.52-	10	GLOB	UNIF	WV 0	1
328	LOAD	X	49	55	3.04	1	1.52	1	GLOB	UNIF	WV 0	1
329	LOAD	Y	49	55	3.04	125	1.52	128	GLOB	UNIF	WV 0	1
330	LOAD	Z	49	55	3.04-	10	1.52-	11	GLOB	UNIF	WV 0	1
331	LOAD	X	12	24	0.00-	1	10.81-	1	GLOB	UNIF	WV 0	1
332	LOAD	Y	12	24	0.00	47	10.81	48	GLOB	UNIF	WV 0	1
333	LOAD	Z	12	24	0.00-	04	10.81-	04	GLOB	UNIF	WV 0	1
334	LOAD	X	12	24	10.81-	1	10.81-	1	GLOB	UNIF	WV 0	1
335	LOAD	Y	12	24	10.81	48	10.81	50	GLOB	UNIF	WV 0	1
336	LOAD	Z	12	24	10.81-	04	10.81-	04	GLOB	UNIF	WV 0	1
337	LOAD	X	12	24	21.63-	1	10.81-	1	GLOB	UNIF	WV 0	1
338	LOAD	Y	12	24	21.63	50	10.81	53	GLOB	UNIF	WV 0	1
339	LOAD	Z	12	24	21.63-	04	10.81-	04	GLOB	UNIF	WV 0	1
340	LOAD	X	24	36	0.00-	1	10.81-	1	GLOB	UNIF	WV 0	1
341	LOAD	Y	24	36	0.00	53	10.81	57	GLOB	UNIF	WV 0	1
342	LOAD	Z	24	36	0.00-	04	10.81-	05	GLOB	UNIF	WV 0	1

```
                      1    1    2    2    3    3    4    4    5    5    6    6    7    7    8
LINE NO. 1....5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0

   343  LOAD X  24  36   10.81-    1  10.81-    1                GLOB UNIF     WV 0 1
   344  LOAD Y  24  36   10.81    57  10.81    64                GLOB UNIF     WV 0 1
   345  LOAD Z  24  36   10.81-   05  10.81-   05                GLOB UNIF     WV 0 1
   346  LOAD X  24  36   21.63-    1  10.81-    1                GLOB UNIF     WV 0 1
   347  LOAD Y  24  36   21.63    64  10.81    71                GLOB UNIF     WV 0 1
   348  LOAD Z  24  36   21.63-   05  10.81-   06                GLOB UNIF     WV 0 1
   349  LOAD X  36  41    0.00-    1   4.73-    1                GLOB UNIF     WV 0 1
   350  LOAD Y  36  41    0.00    73   4.73    77                GLOB UNIF     WV 0 1
   351  LOAD Z  36  41    0.00-   05   4.73-   05                GLOB UNIF     WV 0 1
   352  LOAD X  36  41    4.73-    1   4.73-    1                GLOB UNIF     WV 0 1
   353  LOAD Y  36  41    4.73    77   4.73    82                GLOB UNIF     WV 0 1
   354  LOAD Z  36  41    4.73-   05   4.73-   06                GLOB UNIF     WV 0 1
   355  LOAD X  36  41    9.45-    1   4.73-    1                GLOB UNIF     WV 0 1
   356  LOAD Y  36  41    9.45    82   4.73    88                GLOB UNIF     WV 0 1
   357  LOAD Z  36  41    9.45-   06   4.73-   06                GLOB UNIF     WV 0 1
   358  LOAD X  41  51    0.00-    1   6.09-    1                GLOB UNIF     WV 0 1
   359  LOAD Y  41  51    0.00    88   6.09    96                GLOB UNIF     WV 0 1
   360  LOAD Z  41  51    0.00-   08   6.09-   09                GLOB UNIF     WV 0 1
   361  LOAD X  41  51    6.09-    1   6.09-    1                GLOB UNIF     WV 0 1
   362  LOAD Y  41  51    6.09    96   6.09   106                GLOB UNIF     WV 0 1
   363  LOAD Z  41  51    6.09-   09   6.09-   09                GLOB UNIF     WV 0 1
   364  LOAD X  41  51   12.17-    1   6.09-    1                GLOB UNIF     WV 0 1
   365  LOAD Y  41  51   12.17   106   6.09   118                GLOB UNIF     WV 0 1
   366  LOAD Z  41  51   12.17-   09   6.09-   11                GLOB UNIF     WV 0 1
   367  LOAD X  51  56    0.00-    1   1.52-    1                GLOB UNIF     WV 0 1
   368  LOAD Y  51  56    0.00   118   1.52   121                GLOB UNIF     WV 0 1
   369  LOAD Z  51  56    0.00-   10   1.52-   10                GLOB UNIF     WV 0 1
   370  LOAD X  51  56    1.52-    1   1.52-    1                GLOB UNIF     WV 0 1
   371  LOAD Y  51  56    1.52   121   1.52   125                GLOB UNIF     WV 0 1
   372  LOAD Z  51  56    1.52-   10   1.52-   10                GLOB UNIF     WV 0 1
   373  LOAD X  51  56    3.04-    1   1.52-    1                GLOB UNIF     WV 0 1
   374  LOAD Y  51  56    3.04   125   1.52   128                GLOB UNIF     WV 0 1
   375  LOAD Z  51  56    3.04-   10   1.52-   11                GLOB UNIF     WV 0 1
   376  LOAD Y  14  26    0.00    50  10.81    51                GLOB UNIF     WV 0 1
   377  LOAD Z  14  26    0.00    08  10.81    08                GLOB UNIF     WV 0 1
   378  LOAD Y  14  26   10.81    51  10.81    53                GLOB UNIF     WV 0 1
   379  LOAD Z  14  26   10.81    08  10.81    09                GLOB UNIF     WV 0 1
   380  LOAD Y  14  26   21.63    53  10.81    56                GLOB UNIF     WV 0 1
   381  LOAD Z  14  26   21.63    09  10.81    09                GLOB UNIF     WV 0 1
   382  LOAD Y  26  38    0.00    55  10.86    59                GLOB UNIF     WV 0 1
   383  LOAD Z  26  38    0.00-   11  10.86-   11                GLOB UNIF     WV 0 1
   384  LOAD Y  26  38   10.86    59  10.86    64                GLOB UNIF     WV 0 1
   385  LOAD Z  26  38   10.86-   11  10.86-   12                GLOB UNIF     WV 0 1
   386  LOAD Y  26  38   21.72    64  10.86    70                GLOB UNIF     WV 0 1
   387  LOAD Z  26  38   21.72-   12  10.86-   13                GLOB UNIF     WV 0 1
   388  LOAD Y  38  42    0.00    65   5.01    69                GLOB UNIF     WV 0 1
   389  LOAD Z  38  42    0.00    25   5.01    27                GLOB UNIF     WV 0 1
   390  LOAD Y  38  42    5.01    69   5.01    73                GLOB UNIF     WV 0 1
   391  LOAD Z  38  42    5.01    27   5.01    29                GLOB UNIF     WV 0 1
   392  LOAD Y  38  42   10.02    73   5.01    78                GLOB UNIF     WV 0 1
```

LINE NO.	1...5		1...0	1...5	2...0	2...5/3...0	3...5	4...0/4...5	6...0/6...5		7...5		8...0
393	LOAD	Z	38	42	10.02	29	5.01	31	GLOB	UNIF	WV	0	1
394	LOAD	Y	42	53	0.00	65	7.09	71	GLOB	UNIF	WV	0	1
395	LOAD	Z	42	53	0.00	41	7.09	45	GLOB	UNIF	WV	0	1
396	LOAD	Y	42	53	7.09	71	7.09	79	GLOB	UNIF	WV	0	1
397	LOAD	Z	42	53	7.09	45	7.09	49	GLOB	UNIF	WV	0	1
398	LOAD	Y	42	53	14.17	79	7.09	88	GLOB	UNIF	WV	0	1
399	LOAD	Z	42	53	14.17	49	7.09	55	GLOB	UNIF	WV	0	1
400	LOAD	Y	53	57	0.00	120	1.52	123	GLOB	UNIF	WV	0	1
401	LOAD	Z	53	57	0.00	20	1.52	20	GLOB	UNIF	WV	0	1
402	LOAD	Y	53	57	1.52	123	1.52	126	GLOB	UNIF	WV	0	1
403	LOAD	Z	53	57	1.52	20	1.52	21	GLOB	UNIF	WV	0	1
404	LOAD	Y	53	57	3.04	126	1.52	129	GLOB	UNIF	WV	0	1
405	LOAD	Z	53	57	3.04	21	1.52	21	GLOB	UNIF	WV	0	1
406	LOAD	Y	10	11	0.00	21	9.67	21	GLOB	UNIF	WV	0	1
407	LOAD	Y	10	11	9.67	21	9.67	21	GLOB	UNIF	WV	0	1
408	LOAD	Y	10	11	19.33	21	9.67	21	GLOB	UNIF	WV	0	1
409	LOAD	Y	11	12	0.00	21	9.67	21	GLOB	UNIF	WV	0	1
410	LOAD	Y	11	12	9.67	21	9.67	21	GLOB	UNIF	WV	0	1
411	LOAD	Y	11	12	19.33	21	9.67	21	GLOB	UNIF	WV	0	1
412	LOAD	X	12	13	0.00-	09	9.67-	09	GLOB	UNIF	WV	0	1
413	LOAD	Y	12	13	0.00	05	9.67	05	GLOB	UNIF	WV	0	1
414	LOAD	X	12	13	9.67-	09	9.67-	10	GLOB	UNIF	WV	0	1
415	LOAD	Y	12	13	9.67	05	9.67	06	GLOB	UNIF	WV	0	1
416	LOAD	X	12	13	19.33-	10	9.67-	10	GLOB	UNIF	WV	0	1
417	LOAD	Y	12	13	19.33	06	9.67	06	GLOB	UNIF	WV	0	1
418	LOAD	X	13	14	0.00-	10	9.67-	10	GLOB	UNIF	WV	0	1
419	LOAD	Y	13	14	0.00	06	9.67	06	GLOB	UNIF	WV	0	1
420	LOAD	X	13	14	9.67-	10	9.67-	10	GLOB	UNIF	WV	0	1
421	LOAD	Y	13	14	9.67	06	9.67	06	GLOB	UNIF	WV	0	1
422	LOAD	X	13	14	19.34-	10	9.67-	10	GLOB	UNIF	WV	0	1
423	LOAD	Y	13	14	19.34	06	9.67	06	GLOB	UNIF	WV	0	1
424	LOAD	X	14	15	0.00	10	9.67	10	GLOB	UNIF	WV	0	1
425	LOAD	Y	14	15	0.00	06	9.67	06	GLOB	UNIF	WV	0	1
426	LOAD	X	14	15	9.67	10	9.67	10	GLOB	UNIF	WV	0	1
427	LOAD	Y	14	15	9.67	06	9.67	06	GLOB	UNIF	WV	0	1
428	LOAD	X	14	15	19.34	10	9.67	10	GLOB	UNIF	WV	0	1
429	LOAD	Y	14	15	19.34	06	9.67	06	GLOB	UNIF	WV	0	1
430	LOAD	X	15	10	0.00	10	9.67	10	GLOB	UNIF	WV	0	1
431	LOAD	Y	15	10	0.00	06	9.67	06	GLOB	UNIF	WV	0	1
432	LOAD	X	15	10	9.67	10	9.67	09	GLOB	UNIF	WV	0	1
433	LOAD	Y	15	10	9.67	06	9.67	05	GLOB	UNIF	WV	0	1
434	LOAD	X	15	10	19.33	09	9.67	09	GLOB	UNIF	WV	0	1
435	LOAD	Y	15	10	19.33	05	9.67	05	GLOB	UNIF	WV	0	1
436	LOAD	X	11	13	0.00	07	9.67	07	GLOB	UNIF	WV	0	1
437	LOAD	Y	11	13	0.00	04	9.67	04	GLOB	UNIF	WV	0	1
438	LOAD	X	11	13	9.67	07	9.67	08	GLOB	UNIF	WV	0	1
439	LOAD	Y	11	13	9.67	04	9.67	04	GLOB	UNIF	WV	0	1
440	LOAD	X	11	13	19.33	08	9.67	08	GLOB	UNIF	WV	0	1
441	LOAD	Y	11	13	19.33	04	9.67	04	GLOB	UNIF	WV	0	1
442	LOAD	Y	13	15	0.00	18	9.67	18	GLOB	UNIF	WV	0	1

LINE NO.												
443	LOAD	Y	13	15	9.67	18	9.67	18	GLOB UNIF	WV	0	1
444	LOAD	Y	13	15	19.33	18	9.67	18	GLOB UNIF	WV	0	1
445	LOAD	X	15	11	0.00=	08	9.67=	08	GLOB UNIF	WV	0	1
446	LOAD	Y	15	11	0.00	04	9.67	04	GLOB UNIF	WV	0	1
447	LOAD	X	15	11	9.67=	08	9.67=	07	GLOB UNIF	WV	0	1
448	LOAD	Y	15	11	9.67	04	9.67	04	GLOB UNIF	WV	0	1
449	LOAD	X	15	11	19.33=	07	9.67=	07	GLOB UNIF	WV	0	1
450	LOAD	Y	15	11	19.33	04	9.67	04	GLOB UNIF	WV	0	1
451	LOAD	Y	22	23	0.00	24	8.13	24	GLOB UNIF	WV	0	1
452	LOAD	Y	22	23	8.13	24	8.13	24	GLOB UNIF	WV	0	1
453	LOAD	Y	22	23	16.25	24	8.13	24	GLOB UNIF	WV	0	1
454	LOAD	Y	23	24	0.00	24	8.13	24	GLOB UNIF	WV	0	1
455	LOAD	Y	23	24	8.13	24	8.13	24	GLOB UNIF	WV	0	1
456	LOAD	Y	23	24	16.25	24	8.13	24	GLOB UNIF	WV	0	1
457	LOAD	X	24	25	0.00=	10	8.13=	11	GLOB UNIF	WV	0	1
458	LOAD	Y	24	25	0.00	06	8.13	06	GLOB UNIF	WV	0	1
459	LOAD	X	24	25	8.13=	11	8.13=	11	GLOB UNIF	WV	0	1
460	LOAD	Y	24	25	8.13	06	8.13	06	GLOB UNIF	WV	0	1
461	LOAD	X	24	25	16.25=	11	8.13=	11	GLOB UNIF	WV	0	1
462	LOAD	Y	24	25	16.25	06	8.13	06	GLOB UNIF	WV	0	1
463	LOAD	X	25	26	0.00=	11	8.13=	11	GLOB UNIF	WV	0	1
464	LOAD	Y	25	26	0.00	06	8.13	06	GLOB UNIF	WV	0	1
465	LOAD	X	25	26	8.13=	11	8.13=	11	GLOB UNIF	WV	0	1
466	LOAD	Y	25	26	8.13	06	8.13	06	GLOB UNIF	WV	0	1
467	LOAD	X	25	26	16.25=	11	8.13=	11	GLOB UNIF	WV	0	1
468	LOAD	Y	25	26	16.25	06	8.13	06	GLOB UNIF	WV	0	1
469	LOAD	X	26	27	0.00	11	8.13	11	GLOB UNIF	WV	0	1
470	LOAD	Y	26	27	0.00	06	8.13	06	GLOB UNIF	WV	0	1
471	LOAD	X	26	27	8.13	11	8.13	11	GLOB UNIF	WV	0	1
472	LOAD	Y	26	27	8.13	06	8.13	06	GLOB UNIF	WV	0	1
473	LOAD	X	26	27	16.25	11	8.13	11	GLOB UNIF	WV	0	1
474	LOAD	Y	26	27	16.25	06	8.13	06	GLOB UNIF	WV	0	1
475	LOAD	X	27	22	0.00	11	8.13	11	GLOB UNIF	WV	0	1
476	LOAD	Y	27	22	0.00	06	8.13	06	GLOB UNIF	WV	0	1
477	LOAD	X	27	22	8.13	11	8.13	11	GLOB UNIF	WV	0	1
478	LOAD	Y	27	22	8.13	06	8.13	06	GLOB UNIF	WV	0	1
479	LOAD	X	27	22	16.25	11	8.13	10	GLOB UNIF	WV	0	1
480	LOAD	Y	27	22	16.25	06	8.13	06	GLOB UNIF	WV	0	1
481	LOAD	X	23	25	0.00	08	8.13	08	GLOB UNIF	WV	0	1
482	LOAD	Y	23	25	0.00	05	8.13	05	GLOB UNIF	WV	0	1
483	LOAD	X	23	25	8.13	08	8.13	09	GLOB UNIF	WV	0	1
484	LOAD	Y	23	25	8.13	05	8.13	05	GLOB UNIF	WV	0	1
485	LOAD	X	23	25	16.25	09	8.13	09	GLOB UNIF	WV	0	1
486	LOAD	Y	23	25	16.25	05	8.13	05	GLOB UNIF	WV	0	1
487	LOAD	Y	25	27	0.00	20	8.13	20	GLOB UNIF	WV	0	1
488	LOAD	Y	25	27	8.13	20	8.13	20	GLOB UNIF	WV	0	1
489	LOAD	Y	25	27	16.25	20	8.13	20	GLOB UNIF	WV	0	1
490	LOAD	X	27	23	0.00=	09	8.13=	09	GLOB UNIF	WV	0	1
491	LOAD	Y	27	23	0.00	05	8.13	05	GLOB UNIF	WV	0	1
492	LOAD	X	27	23	8.13=	09	8.13=	08	GLOB UNIF	WV	0	1

LINE NO.											
493	LOAD Y	27	23	8.13	05	8.13	05	GLOB UNIF	WV	0	1
494	LOAD X	27	23	16.25=	08	8.13=	08	GLOB UNIF	WV	0	1
495	LOAD Y	27	23	16.25	05	8.13	05	GLOB UNIF	WV	0	1
496	LOAD Y	34	35	0.00	23	6.59	23	GLOB UNIF	WV	0	1
497	LOAD Y	34	35	6.59	23	6.59	23	GLOB UNIF	WV	0	1
498	LOAD Y	34	35	13.18	23	6.59	23	GLOB UNIF	WV	0	1
499	LOAD Y	35	36	0.00	23	6.59	23	GLOB UNIF	WV	0	1
500	LOAD Y	35	36	6.59	23	6.59	23	GLOB UNIF	WV	0	1
501	LOAD Y	35	36	13.18	23	6.59	23	GLOB UNIF	WV	0	1
502	LOAD X	36	37	0.00=	10	6.59=	10	GLOB UNIF	WV	0	1
503	LOAD Y	36	37	0.00	06	6.59	06	GLOB UNIF	WV	0	1
504	LOAD X	36	37	6.59=	10	6.59=	10	GLOB UNIF	WV	0	1
505	LOAD Y	36	37	6.59	06	6.59	06	GLOB UNIF	WV	0	1
506	LOAD X	36	37	13.18=	10	6.59=	10	GLOB UNIF	WV	0	1
507	LOAD Y	36	37	13.18	06	6.59	06	GLOB UNIF	WV	0	1
508	LOAD X	37	38	0.00=	07	10.07=	07	GLOB UNIF	WV	0	1
509	LOAD Y	37	38	0.00	03	10.07	03	GLOB UNIF	WV	0	1
510	LOAD X	37	38	10.07=	07	10.07=	07	GLOB UNIF	WV	0	1
511	LOAD Y	37	38	10.07	03	10.07	03	GLOB UNIF	WV	0	1
512	LOAD X	37	38	20.15=	07	10.07=	07	GLOB UNIF	WV	0	1
513	LOAD Y	37	38	20.15	03	10.07	02	GLOB UNIF	WV	0	1
514	LOAD X	38	39	0.00	07	10.07	07	GLOB UNIF	WV	0	1
515	LOAD Y	38	39	0.00	02	10.07	03	GLOB UNIF	WV	0	1
516	LOAD X	38	39	10.07	07	10.07	07	GLOB UNIF	WV	0	1
517	LOAD Y	38	39	10.07	03	10.07	03	GLOB UNIF	WV	0	1
518	LOAD X	38	39	20.15	07	10.07	07	GLOB UNIF	WV	0	1
519	LOAD Y	38	39	20.15	03	10.07	03	GLOB UNIF	WV	0	1
520	LOAD X	39	34	0.00	10	6.59	10	GLOB UNIF	WV	0	1
521	LOAD Y	39	34	0.00	06	6.59	06	GLOB UNIF	WV	0	1
522	LOAD X	39	34	6.59	10	6.59	10	GLOB UNIF	WV	0	1
523	LOAD Y	39	34	6.59	06	6.59	06	GLOB UNIF	WV	0	1
524	LOAD X	39	34	13.18	10	6.59	10	GLOB UNIF	WV	0	1
525	LOAD Y	39	34	13.18	06	6.59	06	GLOB UNIF	WV	0	1
526	LOAD X	35	37	0.00	10	6.59	10	GLOB UNIF	WV	0	1
527	LOAD Y	35	37	0.00	06	6.59	06	GLOB UNIF	WV	0	1
528	LOAD X	35	37	6.59	10	6.59	10	GLOB UNIF	WV	0	1
529	LOAD Y	35	37	6.59	06	6.59	06	GLOB UNIF	WV	0	1
530	LOAD X	35	37	13.18	10	6.59	10	GLOB UNIF	WV	0	1
531	LOAD Y	35	37	13.18	06	6.59	06	GLOB UNIF	WV	0	1
532	LOAD Y	37	39	0.00	24	6.59	24	GLOB UNIF	WV	0	1
533	LOAD Y	37	39	6.59	24	6.59	24	GLOB UNIF	WV	0	1
534	LOAD Y	37	39	13.17	24	6.59	24	GLOB UNIF	WV	0	1
535	LOAD X	39	35	0.00=	10	6.59=	10	GLOB UNIF	WV	0	1
536	LOAD Y	39	35	0.00	06	6.59	06	GLOB UNIF	WV	0	1
537	LOAD X	39	35	6.59=	10	6.59=	10	GLOB UNIF	WV	0	1
538	LOAD Y	39	35	6.59	06	6.59	06	GLOB UNIF	WV	0	1
539	LOAD X	39	35	13.18=	10	6.59=	10	GLOB UNIF	WV	0	1
540	LOAD Y	39	35	13.18	06	6.59	06	GLOB UNIF	WV	0	1
541	LOAD Y	49	50	0.00	46	5.05	46	GLOB UNIF	WV	0	1
542	LOAD Y	49	50	5.05	46	5.05	46	GLOB UNIF	WV	0	1

LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0

543	LOAD	Y	49	50	10.10	46	5.05	46	GLOB	UNIF	WV	0 1
544	LOAD	Y	50	51	0.00	46	5.05	46	GLOB	UNIF	WV	0 1
545	LOAD	Y	50	51	5.05	46	5.05	46	GLOB	UNIF	WV	0 1
546	LOAD	Y	50	51	10.10	46	5.05	46	GLOB	UNIF	WV	0 1
547	LOAD	X	51	52	0.00-	20	5.05-	20	GLOB	UNIF	WV	0 1
548	LOAD	Y	51	52	0.00	12	5.05	12	GLOB	UNIF	WV	0 1
549	LOAD	X	51	52	5.05-	20	5.05-	21	GLOB	UNIF	WV	0 1
550	LOAD	Y	51	52	5.05	12	5.05	12	GLOB	UNIF	WV	0 1
551	LOAD	X	51	52	10.10-	21	5.05-	21	GLOB	UNIF	WV	0 1
552	LOAD	Y	51	52	10.10	12	5.05	12	GLOB	UNIF	WV	0 1
553	LOAD	X	52	53	0.00-	21	5.05-	21	GLOB	UNIF	WV	0 1
554	LOAD	Y	52	53	0.00	12	5.05	12	GLOB	UNIF	WV	0 1
555	LOAD	X	52	53	5.05-	21	5.05-	21	GLOB	UNIF	WV	0 1
556	LOAD	Y	52	53	5.05	12	5.05	12	GLOB	UNIF	WV	0 1
557	LOAD	X	52	53	10.10-	21	5.05-	21	GLOB	UNIF	WV	0 1
558	LOAD	Y	52	53	10.10	12	5.05	12	GLOB	UNIF	WV	0 1
559	LOAD	X	53	54	0.00	21	5.05	21	GLOB	UNIF	WV	0 1
560	LOAD	Y	53	54	0.00	12	5.05	12	GLOB	UNIF	WV	0 1
561	LOAD	X	53	54	5.05	21	5.05	21	GLOB	UNIF	WV	0 1
562	LOAD	Y	53	54	5.05	12	5.05	12	GLOB	UNIF	WV	0 1
563	LOAD	X	53	54	10.10	21	5.05	21	GLOB	UNIF	WV	0 1
564	LOAD	Y	53	54	10.10	12	5.05	12	GLOB	UNIF	WV	0 1
565	LOAD	X	54	49	0.00	21	5.05	21	GLOB	UNIF	WV	0 1
566	LOAD	Y	54	49	0.00	12	5.05	12	GLOB	UNIF	WV	0 1
567	LOAD	X	54	49	5.05	21	5.05	20	GLOB	UNIF	WV	0 1
568	LOAD	Y	54	49	5.05	12	5.05	12	GLOB	UNIF	WV	0 1
569	LOAD	X	54	49	10.10	20	5.05	20	GLOB	UNIF	WV	0 1
570	LOAD	Y	54	49	10.10	12	5.05	12	GLOB	UNIF	WV	0 1
571	LOAD	X	50	52	0.00	16	5.05	16	GLOB	UNIF	WV	0 1
572	LOAD	Y	50	52	0.00	09	5.05	09	GLOB	UNIF	WV	0 1
573	LOAD	X	50	52	5.05	16	5.05	17	GLOB	UNIF	WV	0 1
574	LOAD	Y	50	52	5.05	09	5.05	10	GLOB	UNIF	WV	0 1
575	LOAD	X	50	52	10.10	17	5.05	17	GLOB	UNIF	WV	0 1
576	LOAD	Y	50	52	10.10	10	5.05	10	GLOB	UNIF	WV	0 1
577	LOAD	Y	52	54	0.00	39	5.05	39	GLOB	UNIF	WV	0 1
578	LOAD	Y	52	54	5.05	39	5.05	39	GLOB	UNIF	WV	0 1
579	LOAD	Y	52	54	10.09	39	5.05	39	GLOB	UNIF	WV	0 1
580	LOAD	X	54	50	0.00-	17	5.05-	17	GLOB	UNIF	WV	0 1
581	LOAD	Y	54	50	0.00	10	5.05	10	GLOB	UNIF	WV	0 1
582	LOAD	X	54	50	5.05-	17	5.05-	16	GLOB	UNIF	WV	0 1
583	LOAD	Y	54	50	5.05	10	5.05	09	GLOB	UNIF	WV	0 1
584	LOAD	X	54	50	10.10-	16	5.05-	16	GLOB	UNIF	WV	0 1
585	LOAD	Y	54	50	10.10	09	5.05	09	GLOB	UNIF	WV	0 1
586	LOAD	X	11	22	0.00-	1	13.44-	1	GLOB	UNIF	WV	0 1
587	LOAD	Y	11	22	0.00	19	13.44	19	GLOB	UNIF	WV	0 1
588	LOAD	Z	11	22	0.00-	1	13.44-	1	GLOB	UNIF	WV	0 1
589	LOAD	X	11	22	13.44-	1	13.44-	1	GLOB	UNIF	WV	0 1
590	LOAD	Y	11	22	13.44	19	13.44	20	GLOB	UNIF	WV	0 1
591	LOAD	Z	11	22	13.44-	1	13.44-	1	GLOB	UNIF	WV	0 1
592	LOAD	X	11	22	26.88-	1	13.44-	1	GLOB	UNIF	WV	0 1

LINE NO. 1....5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0

593	LOAD	Y	11	22	26.88	20	13.44	21	GLOB	UNIF	WV	0	1
594	LOAD	Z	11	22	26.88-	1	13.44-	1	GLOB	UNIF	WV	0	1
595	LOAD	X	11	24	0.00	1	13.44	1	GLOB	UNIF	WV	0	1
596	LOAD	Y	11	24	0.00	19	13.44	19	GLOB	UNIF	WV	0	1
597	LOAD	Z	11	24	0.00-	1	13.44-	1	GLOB	UNIF	WV	0	1
598	LOAD	X	11	24	13.44	1	13.44	1	GLOB	UNIF	WV	0	1
599	LOAD	Y	11	24	13.44	19	13.44	20	GLOB	UNIF	WV	0	1
600	LOAD	Z	11	24	13.44-	1	13.44-	1	GLOB	UNIF	WV	0	1
601	LOAD	X	11	24	26.88	1	13.44	1	GLOB	UNIF	WV	0	1
602	LOAD	Y	11	24	26.88	20	13.44	21	GLOB	UNIF	WV	0	1
603	LOAD	Z	11	24	26.88-	1	13.44-	1	GLOB	UNIF	WV	0	1
604	LOAD	X	13	24	0.00-	03	13.44-	05	GLOB	UNIF	WV	0	1
605	LOAD	Y	13	24	0.00	14	13.44	14	GLOB	UNIF	WV	0	1
606	LOAD	Z	13	24	0.00	09	13.44	09	GLOB	UNIF	WV	0	1
607	LOAD	X	13	24	13.44-	03	13.44-	03	GLOB	UNIF	WV	0	1
608	LOAD	Y	13	24	13.44	14	13.44	14	GLOB	UNIF	WV	0	1
609	LOAD	Z	13	24	13.44	09	13.44	09	GLOB	UNIF	WV	0	1
610	LOAD	X	13	24	26.88-	03	13.44-	03	GLOB	UNIF	WV	0	1
611	LOAD	Y	13	24	26.88	14	13.44	15	GLOB	UNIF	WV	0	1
612	LOAD	Z	13	24	26.88	09	13.44	09	GLOB	UNIF	WV	0	1
613	LOAD	X	13	26	0.00-	04	13.44-	04	GLOB	UNIF	WV	0	1
614	LOAD	Y	13	26	0.00	16	13.44	16	GLOB	UNIF	WV	0	1
615	LOAD	Z	13	26	0.00-	08	13.44-	08	GLOB	UNIF	WV	0	1
616	LOAD	X	13	26	13.44-	04	13.44-	04	GLOB	UNIF	WV	0	1
617	LOAD	Y	13	26	13.44	16	13.44	17	GLOB	UNIF	WV	0	1
618	LOAD	Z	13	26	13.44-	08	13.44-	08	GLOB	UNIF	WV	0	1
619	LOAD	X	13	26	26.88-	04	13.44-	04	GLOB	UNIF	WV	0	1
620	LOAD	Y	13	26	26.88	17	13.44	17	GLOB	UNIF	WV	0	1
621	LOAD	Z	13	26	26.88-	08	13.44-	09	GLOB	UNIF	WV	0	1
622	LOAD	X	15	26	0.00	04	13.44	04	GLOB	UNIF	WV	0	1
623	LOAD	Y	15	26	0.00	16	13.44	16	GLOB	UNIF	WV	0	1
624	LOAD	Z	15	26	0.00-	08	13.44-	08	GLOB	UNIF	WV	0	1
625	LOAD	X	15	26	13.44	04	13.44	04	GLOB	UNIF	WV	0	1
626	LOAD	Y	15	26	13.44	16	13.44	17	GLOB	UNIF	WV	0	1
627	LOAD	Z	15	26	13.44-	08	13.44-	08	GLOB	UNIF	WV	0	1
628	LOAD	X	15	26	26.88	04	13.44	04	GLOB	UNIF	WV	0	1
629	LOAD	Y	15	26	26.88	17	13.44	17	GLOB	UNIF	WV	0	1
630	LOAD	Z	15	26	26.88-	08	13.44-	09	GLOB	UNIF	WV	0	1
631	LOAD	X	15	22	0.00	03	13.44	03	GLOB	UNIF	WV	0	1
632	LOAD	Y	15	22	0.00	14	13.44	14	GLOB	UNIF	WV	0	1
633	LOAD	Z	15	22	0.00	09	13.44	09	GLOB	UNIF	WV	0	1
634	LOAD	X	15	22	13.44	03	13.44	03	GLOB	UNIF	WV	0	1
635	LOAD	Y	15	22	13.44	14	13.44	14	GLOB	UNIF	WV	0	1
636	LOAD	Z	15	22	13.44	09	13.44	09	GLOB	UNIF	WV	0	1
637	LOAD	X	15	22	26.88	03	13.44	03	GLOB	UNIF	WV	0	1
638	LOAD	Y	15	22	26.88	14	13.44	15	GLOB	UNIF	WV	0	1
639	LOAD	Z	15	22	26.88	09	13.44	09	GLOB	UNIF	WV	0	1
640	LOAD	X	22	36	0.00	1	18.20	1	GLOB	UNIF	WV	0	1
641	LOAD	Y	22	36	0.00	27	18.20	29	GLOB	UNIF	WV	0	1
642	LOAD	Z	22	36	0.00-	1	18.20-	1	GLOB	UNIF	WV	0	1

LINE NO.													
643	LOAD	X	22	36	18.20	1	18.20	1	GLOB	UNIF	WV	0	1
644	LOAD	Y	22	36	18.20	29	18.20	32	GLOB	UNIF	WV	0	1
645	LOAD	Z	22	36	18.20-	1	18.20-	1	GLOB	UNIF	WV	0	1
646	LOAD	X	22	36	36.39	1	18.20	1	GLOB	UNIF	WV	0	1
647	LOAD	Y	22	36	36.39	32	18.20	36	GLOB	UNIF	WV	0	1
648	LOAD	Z	22	36	36.39-	1	18.20-	1	GLOB	UNIF	WV	0	1
649	LOAD	X	24	38	0.00-	08	20.96-	09	GLOB	UNIF	WV	0	1
650	LOAD	Y	24	38	0.00	11	20.96	13	GLOB	UNIF	WV	0	1
651	LOAD	Z	24	38	0.00-	10	20.96-	12	GLOB	UNIF	WV	0	1
652	LOAD	X	24	38	20.96-	09	20.96-	10	GLOB	UNIF	WV	0	1
653	LOAD	Y	24	38	20.96	13	20.96	14	GLOB	UNIF	WV	0	1
654	LOAD	Z	24	38	20.96-	12	20.96-	13	GLOB	UNIF	WV	0	1
655	LOAD	X	24	38	41.93-	10	20.96-	11	GLOB	UNIF	WV	0	1
656	LOAD	Y	24	38	41.93	14	20.96	15	GLOB	UNIF	WV	0	1
657	LOAD	Z	24	38	41.93-	13	20.96-	14	GLOB	UNIF	WV	0	1
658	LOAD	X	26	34	0.00	08	18.20	08	GLOB	UNIF	WV	0	1
659	LOAD	Y	26	34	0.00	14	18.20	15	GLOB	UNIF	WV	0	1
660	LOAD	Z	26	34	0.00	12	18.20	13	GLOB	UNIF	WV	0	1
661	LOAD	X	26	34	18.20	08	18.20	09	GLOB	UNIF	WV	0	1
662	LOAD	Y	26	34	18.20	15	18.20	16	GLOB	UNIF	WV	0	1
663	LOAD	Z	26	34	18.20	13	18.20	14	GLOB	UNIF	WV	0	1
664	LOAD	X	26	34	36.39	09	18.20	09	GLOB	UNIF	WV	0	1
665	LOAD	Y	26	34	36.39	16	18.20	17	GLOB	UNIF	WV	0	1
666	LOAD	Z	26	34	36.39	14	18.20	15	GLOB	UNIF	WV	0	1
667	LOAD	X	36	49	0.00-	1	11.86-	02	GLOB	UNIF	WV	0	1
668	LOAD	Y	36	49	0.00	36	11.86	40	GLOB	UNIF	WV	0	1
669	LOAD	Z	36	49	0.00-	1	11.86-	1	GLOB	UNIF	WV	0	1
670	LOAD	X	36	49	11.86-	02	11.86-	02	GLOB	UNIF	WV	0	1
671	LOAD	Y	36	49	11.86	40	11.86	44	GLOB	UNIF	WV	0	1
672	LOAD	Z	36	49	11.86-	1	11.86-	02	GLOB	UNIF	WV	0	1
673	LOAD	X	36	49	23.72-	02	11.86-	02	GLOB	UNIF	WV	0	1
674	LOAD	Y	36	49	23.72	44	11.86	50	GLOB	UNIF	WV	0	1
675	LOAD	Z	36	49	23.72-	02	11.86-	02	GLOB	UNIF	WV	0	1
676	LOAD	X	36	49	35.58-	02	11.86-	02	GLOB	UNIF	WV	0	1
677	LOAD	Y	36	49	35.58	50	11.86	58	GLOB	UNIF	WV	0	1
678	LOAD	Z	36	49	35.58-	02	11.86-	02	GLOB	UNIF	WV	0	1
679	LOAD	X	38	51	0.00-	08	13.93-	09	GLOB	UNIF	WV	0	1
680	LOAD	Y	38	51	0.00	15	13.93	17	GLOB	UNIF	WV	0	1
681	LOAD	Z	38	51	0.00	16	13.93	18	GLOB	UNIF	WV	0	1
682	LOAD	X	38	51	13.93-	09	13.93-	10	GLOB	UNIF	WV	0	1
683	LOAD	Y	38	51	13.93	17	13.93	19	GLOB	UNIF	WV	0	1
684	LOAD	Z	38	51	13.93	18	13.93	21	GLOB	UNIF	WV	0	1
685	LOAD	X	38	51	27.86-	10	13.93-	11	GLOB	UNIF	WV	0	1
686	LOAD	Y	38	51	27.86	19	13.93	21	GLOB	UNIF	WV	0	1
687	LOAD	Z	38	51	27.86	21	13.93	23	GLOB	UNIF	WV	0	1
688	LOAD	X	38	51	41.79-	11	13.93-	12	GLOB	UNIF	WV	0	1
689	LOAD	Y	38	51	41.79	21	13.93	23	GLOB	UNIF	WV	0	1
690	LOAD	Z	38	51	41.79	23	13.93	26	GLOB	UNIF	WV	0	1
691	LOAD	X	34	53	0.00	09	9.49	10	GLOB	UNIF	WV	0	1
692	LOAD	Y	34	53	0.00	23	9.49	25	GLOB	UNIF	WV	0	1

LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0

693	LOAD	Z	34	53	0.00-	15	9.49-	16	GLOB	UNIF	WV	0	1
694	LOAD	X	34	53	9.49	10	9.49	11	GLOB	UNIF	WV	0	1
695	LOAD	Y	34	53	9.49	25	9.49	28	GLOB	UNIF	WV	0	1
696	LOAD	Z	34	53	9.49-	16	9.49-	18	GLOB	UNIF	WV	0	1
697	LOAD	X	34	53	18.97	11	9.49	13	GLOB	UNIF	WV	0	1
698	LOAD	Y	34	53	18.97	28	9.49	31	GLOB	UNIF	WV	0	1
699	LOAD	Z	34	53	18.97-	18	9.49-	20	GLOB	UNIF	WV	0	1
700	LOAD	X	34	53	28.46	13	9.49	14	GLOB	UNIF	WV	0	1
701	LOAD	Y	34	53	28.46	31	9.49	34	GLOB	UNIF	WV	0	1
702	LOAD	Z	34	53	28.46-	20	9.49-	22	GLOB	UNIF	WV	0	1
703	LOAD	X	34	53	37.95	14	9.49	15	GLOB	UNIF	WV	0	1
704	LOAD	Y	34	53	37.95	34	9.49	38	GLOB	UNIF	WV	0	1
705	LOAD	Z	34	53	37.95-	22	9.49-	25	GLOB	UNIF	WV	0	1
706	LOAD	Y	55	58	0.00	113	5.70	126	GLOB	UNIF	WV	0	1
707	LOAD	Y	55	58	5.70	126	5.70	141	GLOB	UNIF	WV	0	1
708	LOAD	Y	55	58	11.40	141	5.70	158	GLOB	UNIF	WV	0	1
709	LOAD	Y	55	58	17.10	158	5.70	178	GLOB	UNIF	WV	0	1
710	LOAD	Y	55	58	22.80	178	5.70	202	GLOB	UNIF	WV	0	1
711	LOAD	Y	58	61	0.00	202	4.19	221	GLOB	UNIF	WV	0	1
712	LOAD	Y	58	61	4.19	221	4.19	244	GLOB	UNIF	WV	0	1
713	LOAD	Y	58	61	8.39	244	4.19	270	GLOB	UNIF	WV	0	1
714	LOAD	Y	56	59	0.00	113	5.70	126	GLOB	UNIF	WV	0	1
715	LOAD	Y	56	59	5.70	126	5.70	141	GLOB	UNIF	WV	0	1
716	LOAD	Y	56	59	11.40	141	5.70	158	GLOB	UNIF	WV	0	1
717	LOAD	Y	56	59	17.10	158	5.70	178	GLOB	UNIF	WV	0	1
718	LOAD	Y	56	59	22.80	178	5.70	202	GLOB	UNIF	WV	0	1
719	LOAD	Y	59	64	0.00	202	4.19	221	GLOB	UNIF	WV	0	1
720	LOAD	Y	59	64	4.19	221	4.19	244	GLOB	UNIF	WV	0	1
721	LOAD	Y	59	64	8.39	244	4.19	270	GLOB	UNIF	WV	0	1
722	LOAD	Y	57	60	0.00	116	5.70	129	GLOB	UNIF	WV	0	1
723	LOAD	Y	57	60	5.70	129	5.70	143	GLOB	UNIF	WV	0	1
724	LOAD	Y	57	60	11.40	143	5.70	160	GLOB	UNIF	WV	0	1
725	LOAD	Y	57	60	17.10	160	5.70	180	GLOB	UNIF	WV	0	1
726	LOAD	Y	57	60	22.80	180	5.70	201	GLOB	UNIF	WV	0	1
727	LOAD	Y	60	70	0.00	201	2.00	210	GLOB	UNIF	WV	0	1
728	LOAD	Y	60	70	2.00	210	2.00	220	GLOB	UNIF	WV	0	1
729	LOAD	Y	60	70	4.00	220	2.00	231	GLOB	UNIF	WV	0	1
730	LOAD	Y	70	67	0.00	231	.22	232	GLOB	UNIF	WV	0	1
731	LOAD	Y	70	67	.22	232	.22	233	GLOB	UNIF	WV	0	1
732	LOAD	Y	70	67	.44	233	.22	234	GLOB	UNIF	WV	0	1
733	LOAD	Y	70	67	.67	234	.22	235	GLOB	UNIF	WV	0	1
734	LOAD	Y	70	67	.89	235	.22	237	GLOB	UNIF	WV	0	1
735	LOAD	Y	70	67	1.11	237	.22	238	GLOB	UNIF	WV	0	1
736	LOAD	Y	70	67	1.33	238	.22	239	GLOB	UNIF	WV	0	1
737	LOAD	Y	70	67	1.56	239	.22	241	GLOB	UNIF	WV	0	1
738	LOAD	Y	70	67	1.78	241	.22		GLOB	UNIF	WV	0	1
739	LOAD	Y	58	59	0.00	71	9.67	71	GLOB	UNIF	WV	0	1
740	LOAD	Y	58	59	9.67	71	9.67	71	GLOB	UNIF	WV	0	1
741	LOAD	Y	58	59	19.33	71	9.67	71	GLOB	UNIF	WV	0	1
742	LOAD	X	59	60	0.00-	31	9.67-	32	GLOB	UNIF	WV	0	1

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                        1    1    2    2    3    3    4    4    5    5    6    6    7    7    8
LINE NO. 1....5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0

   743  LOAD Y   59  60    0.00    18   9.67    18                    GLOB UNIF    WV 0 1
   744  LOAD X   59  60    9.67*   32   9.67*   32                    GLOB UNIF    WV 0 1
   745  LOAD Y   59  60    9.67    18   9.67    18                    GLOB UNIF    WV 0 1
   746  LOAD X   59  60   19.33*   32   9.67*   31                    GLOB UNIF    WV 0 1
   747  LOAD Y   59  60   19.33    18   9.67    18                    GLOB UNIF    WV 0 1
   748  LOAD X   60  58    0.00    31   9.67    32                    GLOB UNIF    WV 0 1
   749  LOAD Y   60  58    0.00    18   9.67    18                    GLOB UNIF    WV 0 1
   750  LOAD X   60  58    9.67    32   9.67    32                    GLOB UNIF    WV 0 1
   751  LOAD Y   60  58    9.67    18   9.67    18                    GLOB UNIF    WV 0 1
   752  LOAD X   60  58   19.33    32   9.67    31                    GLOB UNIF    WV 0 1
   753  LOAD Y   60  58   19.33    18   9.67    18                    GLOB UNIF    WV 0 1
   754  LOAD Y   59  61    0.00    71   9.13    78                    GLOB UNIF    WV 0 1
   755  LOAD Y   59  61    9.13    78   9.13    86                    GLOB UNIF    WV 0 1
   756  LOAD Y   59  61   18.25    86   9.13    95                    GLOB UNIF    WV 0 1
   757  LOAD X   60  64    0.00*   24   8.41*   27                    GLOB UNIF    WV 0 1
   758  LOAD Y   60  64    0.00    29   8.41    33                    GLOB UNIF    WV 0 1
   759  LOAD Z   60  64    0.00    25   8.41    20                    GLOB UNIF    WV 0 1
   760  LOAD X   60  64    8.41*   27   8.41*   30                    GLOB UNIF    WV 0 1
   761  LOAD Y   60  64    8.41    33   8.41    36                    GLOB UNIF    WV 0 1
   762  LOAD Z   60  64    8.41    28   8.41    31                    GLOB UNIF    WV 0 1
   763  LOAD X   60  64   16.81*   30   8.41*   33                    GLOB UNIF    WV 0 1
   764  LOAD Y   60  64   16.81    36   8.41    39                    GLOB UNIF    WV 0 1
   765  LOAD Z   60  64   16.81    31   8.41    34                    GLOB UNIF    WV 0 1
   766  LOAD X   58  67    0.00    24   7.07    27                    GLOB UNIF    WV 0 1
   767  LOAD Y   58  67    0.00    29   7.07    32                    GLOB UNIF    WV 0 1
   768  LOAD Z   58  67    0.00*   25   7.07*   28                    GLOB UNIF    WV 0 1
   769  LOAD X   58  67    7.07    27   7.07    29                    GLOB UNIF    WV 0 1
   770  LOAD Y   58  67    7.07    32   7.07    35                    GLOB UNIF    WV 0 1
   771  LOAD Z   58  67    7.07*   28   7.07*   30                    GLOB UNIF    WV 0 1
   772  LOAD X   58  67   14.14    29   7.07    31                    GLOB UNIF    WV 0 1
   773  LOAD Y   58  67   14.14    35   7.07    37                    GLOB UNIF    WV 0 1
   774  LOAD Z   58  67   14.14*   30   7.07*   32                    GLOB UNIF    WV 0 1
   775  LOAD Y   70  66    0.00    42    .33    43                    GLOB UNIF    WV 0 1
   776  LOAD Y   70  66     .33    43    .33    43                    GLOB UNIF    WV 0 1
   777  LOAD Y   70  66     .66    43    .33    43                    GLOB UNIF    WV 0 1
   778  LOAD Y   70  66    1.00    43    .33    43                    GLOB UNIF    WV 0 1
   779  LOAD Y   70  66    1.33    43    .33    43                    GLOB UNIF    WV 0 1
   780  LOAD Y   70  66    1.66    43    .33    44                    GLOB UNIF    WV 0 1
   781  LOAD Y   70  66    1.99    44    .33    44                    GLOB UNIF    WV 0 1
   782  LOAD Y   70  66    2.33    44    .33    44                    GLOB UNIF    WV 0 1
   783  LOAD Y   70  66    2.66    44    .33                          GLOB UNIF    WV 0 1
   784  LOAD Y   70  68    0.00    42    .33    43                    GLOB UNIF    WV 0 1
   785  LOAD Y   70  68     .33    43    .33    43                    GLOB UNIF    WV 0 1
   786  LOAD Y   70  68     .66    43    .33    43                    GLOB UNIF    WV 0 1
   787  LOAD Y   70  68    1.00    43    .33    43                    GLOB UNIF    WV 0 1
   788  LOAD Y   70  68    1.33    43    .33    43                    GLOB UNIF    WV 0 1
   789  LOAD Y   70  68    1.66    43    .33    44                    GLOB UNIF    WV 0 1
   790  LOAD Y   70  68    1.99    44    .33    44                    GLOB UNIF    WV 0 1
   791  LOAD Y   70  68    2.33    44    .33    44                    GLOB UNIF    WV 0 1
   792  LOAD Y   70  68    2.66    44    .33                          GLOB UNIF    WV 0 1
```

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LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0
                 1    1    2    2    3    3    4    4    5    5    6    6    7    7    8

   793  LOADCS   2
   794  LOAD Y   43  55    4.08-   345                       GLOB CONC      WN 1 2
   795  LOAD X   43  55                       4.08 244106   GLOB MOMT      WN 1 2
   796  LOAD Y   44  56    4.08-   345                       GLOB CONC      WN 1 2
   797  LOAD X   44  56                       4.08 244106   GLOB MOMT      WN 1 2
   798  LOAD Y   45  57    4.07-   345                       GLOB CONC      WN 1 2
   799  LOAD X   45  57                       4.07 244106   GLOB MOMT      WN 1 2
   800  LOAD Y   43  55    4.08-  1111                       GLOB CONC      WN 2 2
   801  LOAD X   43  55                       4.08 653247   GLOB MOMT      WN 2 2
   802  LOAD Y   44  56    4.08-  1111                       GLOB CONC      WN 2 2
   803  LOAD X   44  56                       4.08 653247   GLOB MOMT      WN 2 2
   804  LOAD Y   45  57    4.07-  1111                       GLOB CONC      WN 2 2
   805  LOAD X   45  57                       4.07 653247   GLOB MOMT      WN 2 2
   806  LOAD X   10  22    0.00-     1  10.81-    1          GLOB UNTF      WV 0 2
   807  LOAD Y   10  22    0.00-    51  10.81-   52          GLOB UNTF      WV 0 2
   808  LOAD Z   10  22    0.00     04  10.81    04          GLOB UNTF      WV 0 2
   809  LOAD X   10  22   10.81-     1  10.81-    1          GLOB UNTF      WV 0 2
   810  LOAD Y   10  22   10.81-    52  10.81-   54          GLOB UNTF      WV 0 2
   811  LOAD Z   10  22   10.81     04  10.81    04          GLOB UNTF      WV 0 2
   812  LOAD X   10  22   21.63-     1  10.81-    1          GLOB UNTF      WV 0 2
   813  LOAD Y   10  22   21.63-    54  10.81-   57          GLOB UNTF      WV 0 2
   814  LOAD Z   10  22   21.63     04  10.81    05          GLOB UNTF      WV 0 2
   815  LOAD X   22  34    0.00-     1  10.81-    1          GLOB UNTF      WV 0 2
   816  LOAD Y   22  34    0.00-    57  10.81-   62          GLOB UNTF      WV 0 2
   817  LOAD Z   22  34    0.00     05  10.81    05          GLOB UNTF      WV 0 2
   818  LOAD X   22  34   10.81-     1  10.81-    1          GLOB UNTF      WV 0 2
   819  LOAD Y   22  34   10.81-    62  10.81-   68          GLOB UNTF      WV 0 2
   820  LOAD Z   22  34   10.81     05  10.81    05          GLOB UNTF      WV 0 2
   821  LOAD X   22  34   21.63-     1  10.81-    1          GLOB UNTF      WV 0 2
   822  LOAD Y   22  34   21.63-    68  10.81-   76          GLOB UNTF      WV 0 2
   823  LOAD Z   22  34   21.63     05  10.81    06          GLOB UNTF      WV 0 2
   824  LOAD X   34  40    0.00-     1   4.73-    1          GLOB UNTF      WV 0 2
   825  LOAD Y   34  40    0.00-    78   4.73-   82          GLOB UNTF      WV 0 2
   826  LOAD Z   34  40    0.00     05   4.73    06          GLOB UNTF      WV 0 2
   827  LOAD X   34  40    4.73-     1   4.73-    1          GLOB UNTF      WV 0 2
   828  LOAD Y   34  40    4.73-    82   4.73-   87          GLOB UNTF      WV 0 2
   829  LOAD Z   34  40    4.73     06   4.73    06          GLOB UNTF      WV 0 2
   830  LOAD X   34  40    9.45-     1   4.73-    1          GLOB UNTF      WV 0 2
   831  LOAD Y   34  40    9.45-    87   4.73-   93          GLOB UNTF      WV 0 2
   832  LOAD Z   34  40    9.45     06   4.73    06          GLOB UNTF      WV 0 2
   833  LOAD X   40  49    0.00-     1   6.09-    1          GLOB UNTF      WV 0 2
   834  LOAD Y   40  49    0.00-    92   6.09-  101          GLOB UNTF      WV 0 2
   835  LOAD Z   40  49    0.00     08   6.09    09          GLOB UNTF      WV 0 2
   836  LOAD X   40  49    6.09-     1   6.09-    1          GLOB UNTF      WV 0 2
   837  LOAD Y   40  49    6.09-   101   6.09-  111          GLOB UNTF      WV 0 2
   838  LOAD Z   40  49    6.09     09   6.09    10          GLOB UNTF      WV 0 2
   839  LOAD X   40  49   12.17-     1   6.09-   02          GLOB UNTF      WV 0 2
   840  LOAD Y   40  49   12.17-   111   6.09-  123          GLOB UNTF      WV 0 2
   841  LOAD Z   40  49   12.17     10   6.09    11          GLOB UNTF      WV 0 2
   842  LOAD X   49  55    0.00-     1   1.52-    1          GLOB UNTF      WV 0 2
```

LINE NO. 1....5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0

843	LOAD	Y	49	55	0.00-	123	1.52-	126	GLOB	UNIF	WV	0 2
844	LOAD	Z	49	55	0.00	10	1.52	10	GLOB	UNIF	WV	0 2
845	LOAD	X	49	55	1.52-	1	1.52-	1	GLOB	UNIF	WV	0 2
846	LOAD	Y	49	55	1.52-	126	1.52-	129	GLOB	UNIF	WV	0 2
847	LOAD	Z	49	55	1.52	10	1.52	11	GLOB	UNIF	WV	0 2
848	LOAD	X	49	55	3.04-	1	1.52-	02	GLOB	UNIF	WV	0 2
849	LOAD	Y	49	55	3.04-	129	1.52-	133	GLOB	UNIF	WV	0 2
850	LOAD	Z	49	55	3.04	11	1.52	11	GLOB	UNIF	WV	0 2
851	LOAD	X	12	24	0.00	1	10.81	1	GLOB	UNIF	WV	0 2
852	LOAD	Y	12	24	0.00-	51	10.81-	52	GLOB	UNIF	WV	0 2
853	LOAD	Z	12	24	0.00	04	10.81	04	GLOB	UNIF	WV	0 2
854	LOAD	X	12	24	10.81	1	10.81	1	GLOB	UNIF	WV	0 2
855	LOAD	Y	12	24	10.81-	52	10.81-	54	GLOB	UNIF	WV	0 2
856	LOAD	Z	12	24	10.81	04	10.81	04	GLOB	UNIF	WV	0 2
857	LOAD	X	12	24	21.63	1	10.81	1	GLOB	UNIF	WV	0 2
858	LOAD	Y	12	24	21.63-	54	10.81-	57	GLOB	UNIF	WV	0 2
859	LOAD	Z	12	24	21.63	04	10.81	05	GLOB	UNIF	WV	0 2
860	LOAD	X	24	36	0.00	1	10.81	1	GLOB	UNIF	WV	0 2
861	LOAD	Y	24	36	0.00-	57	10.81-	62	GLOB	UNIF	WV	0 2
862	LOAD	Z	24	36	0.00	05	10.81	05	GLOB	UNIF	WV	0 2
863	LOAD	X	24	36	10.81	1	10.81	1	GLOB	UNIF	WV	0 2
864	LOAD	Y	24	36	10.81-	62	10.81-	68	GLOB	UNIF	WV	0 2
865	LOAD	Z	24	36	10.81	05	10.81	05	GLOB	UNIF	WV	0 2
866	LOAD	X	24	36	21.63	1	10.81	1	GLOB	UNIF	WV	0 2
867	LOAD	Y	24	36	21.63-	68	10.81-	76	GLOB	UNIF	WV	0 2
868	LOAD	Z	24	36	21.63	05	10.81	06	GLOB	UNIF	WV	0 2
869	LOAD	X	36	41	0.00	1	4.73	1	GLOB	UNIF	WV	0 2
870	LOAD	Y	36	41	0.00-	78	4.73-	82	GLOB	UNIF	WV	0 2
871	LOAD	Z	36	41	0.00	05	4.73	06	GLOB	UNIF	WV	0 2
872	LOAD	X	36	41	4.73	1	4.73	1	GLOB	UNIF	WV	0 2
873	LOAD	Y	36	41	4.73-	82	4.73-	87	GLOB	UNIF	WV	0 2
874	LOAD	Z	36	41	4.73	06	4.73	06	GLOB	UNIF	WV	0 2
875	LOAD	X	36	41	9.45	1	4.73	1	GLOB	UNIF	WV	0 2
876	LOAD	Y	36	41	9.45-	87	4.73-	93	GLOB	UNIF	WV	0 2
877	LOAD	Z	36	41	9.45	06	4.73	06	GLOB	UNIF	WV	0 2
878	LOAD	X	41	51	0.00	1	6.09	1	GLOB	UNIF	WV	0 2
879	LOAD	Y	41	51	0.00-	92	6.09-	101	GLOB	UNIF	WV	0 2
880	LOAD	Z	41	51	0.00	08	6.09	09	GLOB	UNIF	WV	0 2
881	LOAD	X	41	51	6.09	1	6.09	1	GLOB	UNIF	WV	0 2
882	LOAD	Y	41	51	6.09-	101	6.09-	111	GLOB	UNIF	WV	0 2
883	LOAD	Z	41	51	6.09	09	6.09	10	GLOB	UNIF	WV	0 2
884	LOAD	X	41	51	12.17	1	6.09	02	GLOB	UNIF	WV	0 2
885	LOAD	Y	41	51	12.17-	111	6.09-	123	GLOB	UNIF	WV	0 2
886	LOAD	Z	41	51	12.17	10	6.09	11	GLOB	UNIF	WV	0 2
887	LOAD	X	51	56	0.00	1	1.52	1	GLOB	UNIF	WV	0 2
888	LOAD	Y	51	56	0.00-	123	1.52-	126	GLOB	UNIF	WV	0 2
889	LOAD	Z	51	56	0.00	10	1.52	10	GLOB	UNIF	WV	0 2
890	LOAD	X	51	56	1.52	1	1.52	1	GLOB	UNIF	WV	0 2
891	LOAD	Y	51	56	1.52-	126	1.52-	129	GLOB	UNIF	WV	0 2
892	LOAD	Z	51	56	1.52	10	1.52	11	GLOB	UNIF	WV	0 2

LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0

893	LOAD X	51	56	3.04	1	1.52	02	GLOB UNIF	WV	0 2
894	LOAD Y	51	56	3.04=	129	1.52=	133	GLOB UNIF	WV	0 2
895	LOAD Z	51	56	3.04	11	1.52	11	GLOB UNIF	WV	0 2
896	LOAD Y	14	26	0.00=	39	10.81=	41	GLOB UNIF	WV	0 2
897	LOAD Z	14	26	0.00=	07	10.81=	07	GLOB UNIF	WV	0 2
898	LOAD Y	14	26	10.81=	41	10.81=	42	GLOB UNIF	WV	0 2
899	LOAD Z	14	26	10.81=	07	10.81=	07	GLOB UNIF	WV	0 2
900	LOAD Y	14	26	21.63=	42	10.81=	46	GLOB UNIF	WV	0 2
901	LOAD Z	14	26	21.63=	07	10.81=	08	GLOB UNIF	WV	0 2
902	LOAD Y	26	38	0.00=	45	10.86=	47	GLOB UNIF	WV	0 2
903	LOAD Z	26	38	0.00	09	10.86	09	GLOB UNIF	WV	0 2
904	LOAD Y	26	38	10.86=	47	10.86=	51	GLOB UNIF	WV	0 2
905	LOAD Z	26	38	10.86	09	10.86	10	GLOB UNIF	WV	0 2
906	LOAD Y	26	38	21.72=	51	10.86=	55	GLOB UNIF	WV	0 2
907	LOAD Z	26	38	21.72	10	10.86	10	GLOB UNIF	WV	0 2
908	LOAD Y	38	42	0.00=	51	5.01=	55	GLOB UNIF	WV	0 2
909	LOAD Z	38	42	0.00=	20	5.01=	21	GLOB UNIF	WV	0 2
910	LOAD Y	38	42	5.01=	55	5.01=	59	GLOB UNIF	WV	0 2
911	LOAD Z	38	42	5.01=	21	5.01=	23	GLOB UNIF	WV	0 2
912	LOAD Y	38	42	10.02=	59	5.01=	64	GLOB UNIF	WV	0 2
913	LOAD Z	38	42	10.02=	23	5.01=	25	GLOB UNIF	WV	0 2
914	LOAD Y	42	53	0.00=	53	5.31=	58	GLOB UNIF	WV	0 2
915	LOAD Z	42	53	0.00=	33	5.31=	36	GLOB UNIF	WV	0 2
916	LOAD Y	42	53	5.31=	58	5.31=	64	GLOB UNIF	WV	0 2
917	LOAD Z	42	53	5.31=	36	5.31=	40	GLOB UNIF	WV	0 2
918	LOAD Y	42	53	10.63=	64	5.31=	70	GLOB UNIF	WV	0 2
919	LOAD Z	42	53	10.63=	40	5.31=	44	GLOB UNIF	WV	0 2
920	LOAD Y	42	53	15.94=	70	5.31=	78	GLOB UNIF	WV	0 2
921	LOAD Z	42	53	15.94=	44	5.31=	49	GLOB UNIF	WV	0 2
922	LOAD Y	53	57	0.00=	106	1.52=	109	GLOB UNIF	WV	0 2
923	LOAD Z	53	57	0.00=	18	1.52=	18	GLOB UNIF	WV	0 2
924	LOAD Y	53	57	1.52=	109	1.52=	113	GLOB UNIF	WV	0 2
925	LOAD Z	53	57	1.52=	18	1.52=	19	GLOB UNIF	WV	0 2
926	LOAD Y	53	57	3.04=	113	1.52=	116	GLOB UNIF	WV	0 2
927	LOAD Z	53	57	3.04=	19	1.52=	19	GLOB UNIF	WV	0 2
928	LOAD Y	10	11	0.00=	23	9.67=	23	GLOB UNIF	WV	0 2
929	LOAD Y	10	11	9.67=	23	9.67=	23	GLOB UNIF	WV	0 2
930	LOAD Y	10	11	19.33=	23	9.67=	23	GLOB UNIF	WV	0 2
931	LOAD Y	11	12	0.00=	23	9.67=	23	GLOB UNIF	WV	0 2
932	LOAD Y	11	12	9.67=	23	9.67=	23	GLOB UNIF	WV	0 2
933	LOAD Y	11	12	19.33=	23	9.67=	23	GLOB UNIF	WV	0 2
934	LOAD X	12	13	0.00	10	9.67	10	GLOB UNIF	WV	0 2
935	LOAD Y	12	13	0.00=	06	9.67=	06	GLOB UNIF	WV	0 2
936	LOAD X	12	13	9.67	10	9.67	10	GLOB UNIF	WV	0 2
937	LOAD Y	12	13	9.67=	06	9.67=	06	GLOB UNIF	WV	0 2
938	LOAD X	12	13	19.33	10	9.67	09	GLOB UNIF	WV	0 2
939	LOAD Y	12	13	19.33=	06	9.67=	05	GLOB UNIF	WV	0 2
940	LOAD X	13	14	0.00	09	9.67	09	GLOB UNIF	WV	0 2
941	LOAD Y	13	14	0.00=	05	9.67=	05	GLOB UNIF	WV	0 2
942	LOAD X	13	14	9.67	09	9.67	08	GLOB UNIF	WV	0 2

LINE NO.	1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0										
943	LOAD Y	13	14	9.67=	05	9.67=	05	GLOB UNTF	WV	0	2
944	LOAD X	13	14	19.34	08	9.67	08	GLOB UNTF	WV	0	2
945	LOAD Y	13	14	19.34=	05	9.67=	05	GLOB UNTF	WV	0	2
946	LOAD X	14	15	0.00=	08	9.67=	08	GLOB UNTF	WV	0	2
947	LOAD Y	14	15	0.00=	05	9.67=	05	GLOB UNTF	WV	0	2
948	LOAD X	14	15	9.67=	08	9.67=	09	GLOB UNTF	WV	0	2
949	LOAD Y	14	15	9.67=	05	9.67=	05	GLOB UNTF	WV	0	2
950	LOAD X	14	15	19.34=	09	9.67=	09	GLOB UNTF	WV	0	2
951	LOAD Y	14	15	19.34=	05	9.67=	05	GLOB UNTF	WV	0	2
952	LOAD X	15	10	0.00=	09	9.67=	10	GLOB UNTF	WV	0	2
953	LOAD Y	15	10	0.00=	05	9.67=	06	GLOB UNTF	WV	0	2
954	LOAD X	15	10	9.67=	10	9.67=	10	GLOB UNTF	WV	0	2
955	LOAD Y	15	10	9.67=	06	9.67=	06	GLOB UNTF	WV	0	2
956	LOAD X	15	10	19.33=	10	9.67=	10	GLOB UNTF	WV	0	2
957	LOAD Y	15	10	19.33=	06	9.67=	06	GLOB UNTF	WV	0	2
958	LOAD X	11	13	0.00=	08	9.67=	08	GLOB UNTF	WV	0	2
959	LOAD Y	11	13	0.00=	04	9.67=	04	GLOB UNTF	WV	0	2
960	LOAD X	11	13	9.67=	08	9.67=	07	GLOB UNTF	WV	0	2
961	LOAD Y	11	13	9.67=	04	9.67=	04	GLOB UNTF	WV	0	2
962	LOAD X	11	13	19.33=	07	9.67=	07	GLOB UNTF	WV	0	2
963	LOAD Y	11	13	19.33=	04	9.67=	04	GLOB UNTF	WV	0	2
964	LOAD Y	13	15	0.00=	17	9.67=	17	GLOB UNTF	WV	0	2
965	LOAD Y	13	15	9.67=	17	9.67=	17	GLOB UNTF	WV	0	2
966	LOAD Y	13	15	19.33=	17	9.67=	17	GLOB UNTF	WV	0	2
967	LOAD X	15	11	0.00	07	9.67	07	GLOB UNTF	WV	0	2
968	LOAD Y	15	11	0.00=	04	9.67=	04	GLOB UNTF	WV	0	2
969	LOAD X	15	11	9.67	07	9.67	08	GLOB UNTF	WV	0	2
970	LOAD Y	15	11	9.67=	04	9.67=	04	GLOB UNTF	WV	0	2
971	LOAD X	15	11	19.33	08	9.67	08	GLOB UNTF	WV	0	2
972	LOAD Y	15	11	19.33=	04	9.67=	04	GLOB UNTF	WV	0	2
973	LOAD Y	22	23	0.00=	26	8.13=	26	GLOB UNTF	WV	0	2
974	LOAD Y	22	23	8.13=	26	8.13=	26	GLOB UNTF	WV	0	2
975	LOAD Y	22	23	16.25=	26	8.13=	26	GLOB UNTF	WV	0	2
976	LOAD Y	23	24	0.00=	26	8.13=	26	GLOB UNTF	WV	0	2
977	LOAD Y	23	24	8.13=	26	8.13=	26	GLOB UNTF	WV	0	2
978	LOAD Y	23	24	16.25=	26	8.13=	26	GLOB UNTF	WV	0	2
979	LOAD X	24	25	0.00	11	8.13	11	GLOB UNTF	WV	0	2
980	LOAD Y	24	25	0.00=	06	8.13=	06	GLOB UNTF	WV	0	2
981	LOAD X	24	25	8.13	11	8.13	11	GLOB UNTF	WV	0	2
982	LOAD Y	24	25	8.13=	06	8.13=	06	GLOB UNTF	WV	0	2
983	LOAD X	24	25	16.25	11	8.13	11	GLOB UNTF	WV	0	2
984	LOAD Y	24	25	16.25=	06	8.13=	06	GLOB UNTF	WV	0	2
985	LOAD X	25	26	0.00	11	8.13	10	GLOB UNTF	WV	0	2
986	LOAD Y	25	26	0.00=	06	8.13=	06	GLOB UNTF	WV	0	2
987	LOAD X	25	26	8.13	10	8.13	10	GLOB UNTF	WV	0	2
988	LOAD Y	25	26	8.13=	06	8.13=	06	GLOB UNTF	WV	0	2
989	LOAD X	25	26	16.25	10	8.13	09	GLOB UNTF	WV	0	2
990	LOAD Y	25	26	16.25=	06	8.13=	05	GLOB UNTF	WV	0	2
991	LOAD X	26	27	0.00=	09	8.13=	10	GLOB UNTF	WV	0	2
992	LOAD Y	26	27	0.00=	05	8.13=	06	GLOB UNTF	WV	0	2

LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0

LINE NO.												
993	LOAD	X	26	27	8.13=	10	8.13=	10	GLOB	UNIF	WV	0 2
994	LOAD	Y	26	27	8.13=	06	8.13=	06	GLOB	UNIF	WV	0 2
995	LOAD	X	26	27	16.25=	10	8.13=	11	GLOB	UNIF	WV	0 2
996	LOAD	Y	26	27	16.25=	06	8.13=	06	GLOB	UNIF	WV	0 2
997	LOAD	X	27	22	0.00=	11	8.13=	11	GLOB	UNIF	WV	0 2
998	LOAD	Y	27	22	0.00=	06	8.13=	06	GLOB	UNIF	WV	0 2
999	LOAD	X	27	22	8.13=	11	8.13=	11	GLOB	UNIF	WV	0 2
1000	LOAD	Y	27	22	8.13=	06	8.13=	06	GLOB	UNIF	WV	0 2
1001	LOAD	X	27	22	16.25=	11	8.13=	11	GLOB	UNIF	WV	0 2
1002	LOAD	Y	27	22	16.25=	06	8.13=	06	GLOB	UNIF	WV	0 2
1003	LOAD	X	23	25	0.00=	09	8.13=	09	GLOB	UNIF	WV	0 2
1004	LOAD	Y	23	25	0.00=	05	8.13=	05	GLOB	UNIF	WV	0 2
1005	LOAD	X	23	25	8.13=	09	8.13=	08	GLOB	UNIF	WV	0 2
1006	LOAD	Y	23	25	8.13=	05	8.13=	05	GLOB	UNIF	WV	0 2
1007	LOAD	X	23	25	16.25=	08	8.13=	08	GLOB	UNIF	WV	0 2
1008	LOAD	Y	23	25	16.25=	05	8.13=	05	GLOB	UNIF	WV	0 2
1009	LOAD	Y	25	27	0.00=	19	8.13=	19	GLOB	UNIF	WV	0 2
1010	LOAD	Y	25	27	8.13=	19	8.13=	19	GLOB	UNIF	WV	0 2
1011	LOAD	Y	25	27	16.25=	19	8.13=	19	GLOB	UNIF	WV	0 2
1012	LOAD	X	27	23	0.00	08	8.13	08	GLOB	UNIF	WV	0 2
1013	LOAD	Y	27	23	0.00=	05	8.13=	05	GLOB	UNIF	WV	0 2
1014	LOAD	X	27	23	8.13	08	8.13	09	GLOB	UNIF	WV	0 2
1015	LOAD	Y	27	23	8.13=	05	8.13=	05	GLOB	UNIF	WV	0 2
1016	LOAD	X	27	23	16.25	09	8.13	09	GLOB	UNIF	WV	0 2
1017	LOAD	Y	27	23	16.25=	05	8.13=	05	GLOB	UNIF	WV	0 2
1018	LOAD	Y	34	35	0.00=	24	6.59=	24	GLOB	UNIF	WV	0 2
1019	LOAD	Y	34	35	6.59=	24	6.59=	24	GLOB	UNIF	WV	0 2
1020	LOAD	Y	34	35	13.18=	24	6.59=	24	GLOB	UNIF	WV	0 2
1021	LOAD	Y	35	36	0.00=	24	6.59=	24	GLOB	UNIF	WV	0 2
1022	LOAD	Y	35	36	6.59=	24	6.59=	24	GLOB	UNIF	WV	0 2
1023	LOAD	Y	35	36	13.18=	24	6.59=	24	GLOB	UNIF	WV	0 2
1024	LOAD	X	36	37	0.00	10	6.59	10	GLOB	UNIF	WV	0 2
1025	LOAD	Y	36	37	0.00=	06	6.59=	06	GLOB	UNIF	WV	0 2
1026	LOAD	X	36	37	6.59	10	6.59	10	GLOB	UNIF	WV	0 2
1027	LOAD	Y	36	37	6.59=	06	6.59=	06	GLOB	UNIF	WV	0 2
1028	LOAD	X	36	37	13.18	10	6.59	10	GLOB	UNIF	WV	0 2
1029	LOAD	Y	36	37	13.18=	06	6.59=	06	GLOB	UNIF	WV	0 2
1030	LOAD	X	37	38	0.00	07	10.07	07	GLOB	UNIF	WV	0 2
1031	LOAD	Y	37	38	0.00=	02	10.07=	02	GLOB	UNIF	WV	0 2
1032	LOAD	X	37	38	10.07	07	10.07	06	GLOB	UNIF	WV	0 2
1033	LOAD	Y	37	38	10.07=	02	10.07=	02	GLOB	UNIF	WV	0 2
1034	LOAD	X	37	38	20.15	06	10.07	06	GLOB	UNIF	WV	0 2
1035	LOAD	Y	37	38	20.15=	02	10.07=	02	GLOB	UNIF	WV	0 2
1036	LOAD	X	38	39	0.00=	06	10.07=	06	GLOB	UNIF	WV	0 2
1037	LOAD	Y	38	39	0.00=	02	10.07=	02	GLOB	UNIF	WV	0 2
1038	LOAD	X	38	39	10.07=	06	10.07=	07	GLOB	UNIF	WV	0 2
1039	LOAD	Y	38	39	10.07=	02	10.07=	02	GLOB	UNIF	WV	0 2
1040	LOAD	X	38	39	20.15=	07	10.07=	07	GLOB	UNIF	WV	0 2
1041	LOAD	Y	38	39	20.15=	02	10.07=	02	GLOB	UNIF	WV	0 2
1042	LOAD	X	39	34	0.00=	10	6.59=	10	GLOB	UNIF	WV	0 2

LINE NO.											
1043	LOAD Y	39	34	0.00-	06	6.59-	06	GLOB UNIF	WV	0	2
1044	LOAD X	39	34	6.59-	10	6.59-	10	GLOB UNIF	WV	0	2
1045	LOAD Y	39	34	6.59-	06	6.59-	06	GLOB UNIF	WV	0	2
1046	LOAD X	39	34	13.18-	10	6.59-	10	GLOB UNIF	WV	0	2
1047	LOAD Y	39	34	13.18-	06	6.59-	06	GLOB UNIF	WV	0	2
1048	LOAD X	35	37	0.00-	10	6.59-	10	GLOB UNIF	WV	0	2
1049	LOAD Y	35	37	0.00-	06	6.59-	06	GLOB UNIF	WV	0	2
1050	LOAD X	35	37	6.59-	10	6.59-	10	GLOB UNIF	WV	0	2
1051	LOAD Y	35	37	6.59-	06	6.59-	06	GLOB UNIF	WV	0	2
1052	LOAD X	35	37	13.18-	10	6.59-	10	GLOB UNIF	WV	0	2
1053	LOAD Y	35	37	13.18-	06	6.59-	06	GLOB UNIF	WV	0	2
1054	LOAD Y	37	39	0.00-	23	6.59-	23	GLOB UNIF	WV	0	2
1055	LOAD Y	37	39	6.59-	23	6.59-	23	GLOB UNIF	WV	0	2
1056	LOAD Y	37	39	13.17-	23	6.59-	23	GLOB UNIF	WV	0	2
1057	LOAD X	39	35	0.00	10	6.59	10	GLOB UNIF	WV	0	2
1058	LOAD Y	39	35	0.00-	06	6.59-	06	GLOB UNIF	WV	0	2
1059	LOAD X	39	35	6.59	10	6.59	10	GLOB UNIF	WV	0	2
1060	LOAD Y	39	35	6.59-	06	6.59-	06	GLOB UNIF	WV	0	2
1061	LOAD X	39	35	13.18	10	6.59	10	GLOB UNIF	WV	0	2
1062	LOAD Y	39	35	13.18-	06	6.59-	06	GLOB UNIF	WV	0	2
1063	LOAD Y	49	50	0.00-	48	5.05-	48	GLOB UNIF	WV	0	2
1064	LOAD Y	49	50	5.05-	48	5.05-	48	GLOB UNIF	WV	0	2
1065	LOAD Y	49	50	10.10-	48	5.05-	48	GLOB UNIF	WV	0	2
1066	LOAD Y	50	51	0.00-	48	5.05-	48	GLOB UNIF	WV	0	2
1067	LOAD Y	50	51	5.05-	48	5.05-	48	GLOB UNIF	WV	0	2
1068	LOAD Y	50	51	10.10-	48	5.05-	48	GLOB UNIF	WV	0	2
1069	LOAD X	51	52	0.00	21	5.05	21	GLOB UNIF	WV	0	2
1070	LOAD Y	51	52	0.00-	12	5.05-	12	GLOB UNIF	WV	0	2
1071	LOAD X	51	52	5.05	21	5.05	20	GLOB UNIF	WV	0	2
1072	LOAD Y	51	52	5.05-	12	5.05-	12	GLOB UNIF	WV	0	2
1073	LOAD X	51	52	10.10	20	5.05	20	GLOB UNIF	WV	0	2
1074	LOAD Y	51	52	10.10-	12	5.05-	12	GLOB UNIF	WV	0	2
1075	LOAD X	52	53	0.00	20	5.05	20	GLOB UNIF	WV	0	2
1076	LOAD Y	52	53	0.00-	12	5.05-	11	GLOB UNIF	WV	0	2
1077	LOAD X	52	53	5.05	20	5.05	19	GLOB UNIF	WV	0	2
1078	LOAD Y	52	53	5.05-	11	5.05-	11	GLOB UNIF	WV	0	2
1079	LOAD X	52	53	10.10	19	5.05	18	GLOB UNIF	WV	0	2
1080	LOAD Y	52	53	10.10-	11	5.05-	11	GLOB UNIF	WV	0	2
1081	LOAD X	53	54	0.00-	18	5.05-	19	GLOB UNIF	WV	0	2
1082	LOAD Y	53	54	0.00-	11	5.05-	11	GLOB UNIF	WV	0	2
1083	LOAD X	53	54	5.05-	19	5.05-	20	GLOB UNIF	WV	0	2
1084	LOAD Y	53	54	5.05-	11	5.05-	11	GLOB UNIF	WV	0	2
1085	LOAD X	53	54	10.10-	20	5.05-	20	GLOB UNIF	WV	0	2
1086	LOAD Y	53	54	10.10-	11	5.05-	12	GLOB UNIF	WV	0	2
1087	LOAD X	54	49	0.00-	20	5.05-	20	GLOB UNIF	WV	0	2
1088	LOAD Y	54	49	0.00-	12	5.05-	12	GLOB UNIF	WV	0	2
1089	LOAD X	54	49	5.05-	20	5.05-	21	GLOB UNIF	WV	0	2
1090	LOAD Y	54	49	5.05-	12	5.05-	12	GLOB UNIF	WV	0	2
1091	LOAD X	54	49	10.10-	21	5.05-	21	GLOB UNIF	WV	0	2
1092	LOAD Y	54	49	10.10-	12	5.05-	12	GLOB UNIF	WV	0	2

```
LINE A . 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0
```

LINE												
1093	LOAD X	50	52	0.00-	17	5.05-	16	GLOB UNIF	WV	0	2
1094	LOAD Y	50	52	0.00-	10	5.05-	09	GLOB UNIF	WV	0	2
1095	LOAD X	50	52	5.05-	16	5.05-	16	GLOB UNIF	WV	0	2
1096	LOAD Y	50	52	5.05-	09	5.05-	09	GLOB UNIF	WV	0	2
1097	LOAD X	50	52	10.10-	16	5.05-	16	GLOB UNIF	WV	0	2
1098	LOAD Y	50	52	10.10-	09	5.05-	09	GLOB UNIF	WV	0	2
1099	LOAD Y	52	54	0.00-	37	5.05-	37	GLOB UNIF	WV	0	2
1100	LOAD Y	52	54	5.05-	37	5.05-	37	GLOB UNIF	WV	0	2
1101	LOAD Y	52	54	10.09-	37	5.05-	37	GLOB UNIF	WV	0	2
1102	LOAD X	54	50	0.00	16	5.05	16	GLOB UNIF	WV	0	2
1103	LOAD Y	54	50	0.00-	09	5.05-	09	GLOB UNIF	WV	0	2
1104	LOAD X	54	50	5.05	16	5.05	16	GLOB UNIF	WV	0	2
1105	LOAD Y	54	50	5.05-	09	5.05-	09	GLOB UNIF	WV	0	2
1106	LOAD X	54	50	10.10	16	5.05	17	GLOB UNIF	WV	0	2
1107	LOAD Y	54	50	10.10-	09	5.05-	10	GLOB UNIF	WV	0	2
1108	LOAD X	11	22	0.00	1	13.44	1	GLOB UNIF	WV	0	2
1109	LOAD Y	11	22	0.00-	21	13.44-	21	GLOB UNIF	WV	0	2
1110	LOAD Z	11	22	0.00	1	13.44	1	GLOB UNIF	WV	0	2
1111	LOAD X	11	22	13.44	1	13.44	1	GLOB UNIF	WV	0	2
1112	LOAD Y	11	22	13.44-	21	13.44-	22	GLOB UNIF	WV	0	2
1113	LOAD Z	11	22	13.44	1	13.44	1	GLOB UNIF	WV	0	2
1114	LOAD X	11	22	26.88	1	13.44	1	GLOB UNIF	WV	0	2
1115	LOAD Y	11	22	26.88-	22	13.44-	23	GLOB UNIF	WV	0	2
1116	LOAD Z	11	22	26.88	1	13.44	1	GLOB UNIF	WV	0	2
1117	LOAD X	11	24	0.00-	1	13.44-	1	GLOB UNIF	WV	0	2
1118	LOAD Y	11	24	0.00-	21	13.44-	21	GLOB UNIF	WV	0	2
1119	LOAD Z	11	24	0.00	1	13.44	1	GLOB UNIF	WV	0	2
1120	LOAD X	11	24	13.44-	1	13.44-	1	GLOB UNIF	WV	0	2
1121	LOAD Y	11	24	13.44-	21	13.44-	22	GLOB UNIF	WV	0	2
1122	LOAD Z	11	24	13.44	1	13.44	1	GLOB UNIF	WV	0	2
1123	LOAD X	11	24	26.88-	1	13.44-	1	GLOB UNIF	WV	0	2
1124	LOAD Y	11	24	26.88-	22	13.44-	23	GLOB UNIF	WV	0	2
1125	LOAD Z	11	24	26.88	1	13.44	1	GLOB UNIF	WV	0	2
1126	LOAD X	13	24	0.00	03	13.44	03	GLOB UNIF	WV	0	2
1127	LOAD Y	13	24	0.00-	13	13.44-	14	GLOB UNIF	WV	0	2
1128	LOAD Z	13	24	0.00-	08	13.44-	09	GLOB UNIF	WV	0	2
1129	LOAD X	13	24	13.44	03	13.44	03	GLOB UNIF	WV	0	2
1130	LOAD Y	13	24	13.44-	14	13.44-	15	GLOB UNIF	WV	0	2
1131	LOAD Z	13	24	13.44-	09	13.44-	09	GLOB UNIF	WV	0	2
1132	LOAD X	13	24	26.88	03	13.44	03	GLOB UNIF	WV	0	2
1133	LOAD Y	13	24	26.88-	15	13.44-	16	GLOB UNIF	WV	0	2
1134	LOAD Z	13	24	26.88-	09	13.44-	10	GLOB UNIF	WV	0	2
1135	LOAD X	13	26	0.00	03	13.44	03	GLOB UNIF	WV	0	2
1136	LOAD Y	13	26	0.00-	15	13.44-	10	GLOB UNIF	WV	0	2
1137	LOAD Z	13	26	0.00	07	13.44	07	GLOB UNIF	WV	0	2
1138	LOAD X	13	26	13.44	03	13.44	03	GLOB UNIF	WV	0	2
1139	LOAD Y	13	26	13.44-	14	13.44-	14	GLOB UNIF	WV	0	2
1140	LOAD Z	13	26	13.44	07	13.44	07	GLOB UNIF	WV	0	2
1141	LOAD X	13	26	26.88	03	13.44	03	GLOB UNIF	WV	0	2
1142	LOAD Y	13	26	26.88-	14	13.44-	14	GLOB UNIF	WV	0	2

```
LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0
                  1    1    2    2    3    3    4    4    5    5    6    6    7    7    8

  1143 LOAD Z  13  26  26.88    07  13.44    07           GLOB UNTF   WV 0 2
  1144 LOAD X  15  26   0.00-   03  13.44-   03           GLOB UNTF   WV 0 2
  1145 LOAD Y  15  26   0.00-   15  13.44-   14           GLOB UNTF   WV 0 2
  1146 LOAD Z  15  26   0.00    07  13.44    07           GLOB UNTF   WV 0 2
  1147 LOAD X  15  26  13.44-   03  13.44-   03           GLOB UNTF   WV 0 2
  1148 LOAD Y  15  26  13.44-   14  13.44-   14           GLOB UNTF   WV 0 2
  1149 LOAD Z  15  26  13.44    07  13.44    07           GLOB UNTF   WV 0 2
  1150 LOAD X  15  26  26.88-   03  13.44-   03           GLOB UNTF   WV 0 2
  1151 LOAD Y  15  26  26.88-   14  13.44-   14           GLOB UNTF   WV 0 2
  1152 LOAD Z  15  26  26.88    07  13.44    07           GLOB UNTF   WV 0 2
  1153 LOAD X  15  22   0.00-   03  13.44-   03           GLOB UNTF   WV 0 2
  1154 LOAD Y  15  22   0.00-   13  13.44-   14           GLOB UNTF   WV 0 2
  1155 LOAD Z  15  22   0.00-   08  13.44-   09           GLOB UNTF   WV 0 2
  1156 LOAD X  15  22  13.44-   03  13.44-   03           GLOB UNTF   WV 0 2
  1157 LOAD Y  15  22  13.44-   14  13.44-   15           GLOB UNTF   WV 0 2
  1158 LOAD Z  15  22  13.44-   09  13.44-   09           GLOB UNTF   WV 0 2
  1159 LOAD X  15  22  26.88-   03  13.44-   03           GLOB UNTF   WV 0 2
  1160 LOAD Y  15  22  26.88-   15  13.44-   16           GLOB UNTF   WV 0 2
  1161 LOAD Z  15  22  26.88-   09  13.44-   10           GLOB UNTF   WV 0 2
  1162 LOAD X  22  36   0.00-    1  18.20-    1           GLOB UNTF   WV 0 2
  1163 LOAD Y  22  36   0.00-   29  18.20-   31           GLOB UNTF   WV 0 2
  1164 LOAD Z  22  36   0.00     1  18.20     1           GLOB UNTF   WV 0 2
  1165 LOAD X  22  36  18.20-    1  18.20-    1           GLOB UNTF   WV 0 2
  1166 LOAD Y  22  36  18.20-   31  18.20-   34           GLOB UNTF   WV 0 2
  1167 LOAD Z  22  36  18.20     1  18.20     1           GLOB UNTF   WV 0 2
  1168 LOAD X  22  36  36.39-    1  18.20-    1           GLOB UNTF   WV 0 2
  1169 LOAD Y  22  36  36.39-   34  18.20-   38           GLOB UNTF   WV 0 2
  1170 LOAD Z  22  36  36.39     1  18.20     1           GLOB UNTF   WV 0 2
  1171 LOAD X  24  38   0.00    09  20.96    09           GLOB UNTF   WV 0 2
  1172 LOAD Y  24  38   0.00-   12  20.96-   12           GLOB UNTF   WV 0 2
  1173 LOAD Z  24  38   0.00    11  20.96    12           GLOB UNTF   WV 0 2
  1174 LOAD X  24  38  20.96    09  20.96    09           GLOB UNTF   WV 0 2
  1175 LOAD Y  24  38  20.96-   12  20.96-   12           GLOB UNTF   WV 0 2
  1176 LOAD Z  24  38  20.96    12  20.96    12           GLOB UNTF   WV 0 2
  1177 LOAD X  24  38  41.93    09  20.96    08           GLOB UNTF   WV 0 2
  1178 LOAD Y  24  38  41.93-   12  20.96-   12           GLOB UNTF   WV 0 2
  1179 LOAD Z  24  38  41.93    12  20.96    11           GLOB UNTF   WV 0 2
  1180 LOAD X  26  34   0.00-   06  13.65-   07           GLOB UNTF   WV 0 2
  1181 LOAD Y  26  34   0.00-   11  13.65-   13           GLOB UNTF   WV 0 2
  1182 LOAD Z  26  34   0.00-   10  13.65-   11           GLOB UNTF   WV 0 2
  1183 LOAD X  26  34  13.65-   07  13.65-   08           GLOB UNTF   WV 0 2
  1184 LOAD Y  26  34  13.65-   13  13.65-   14           GLOB UNTF   WV 0 2
  1185 LOAD Z  26  34  13.65-   11  13.65-   13           GLOB UNTF   WV 0 2
  1186 LOAD X  26  34  27.29-   08  13.65-   09           GLOB UNTF   WV 0 2
  1187 LOAD Y  26  34  27.29-   14  13.65-   16           GLOB UNTF   WV 0 2
  1188 LOAD Z  26  34  27.29-   13  13.65-   14           GLOB UNTF   WV 0 2
  1189 LOAD X  26  34  40.94-   09  13.65-   10           GLOB UNTF   WV 0 2
  1190 LOAD Y  26  34  40.94-   16  13.65-   16           GLOB UNTF   WV 0 2
  1191 LOAD Z  26  34  40.94-   14  13.65-   16           GLOB UNTF   WV 0 2
  1192 LO    X  36  49   0.00    02  11.86    02           GLOB UNTF   WV 0 2
```

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               1    1    2    2    3    3    4    4    5    5    6    6    7    7    8
LINE NO. 1....5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0
```

1193	LOAD Y	36	49	0.00-	38	11.86-	42	GLOB UNIF	WV	0	2
1194	LOAD Z	36	49	0.00	1	11.86	02	GLOB UNIF	WV	0	2
1195	LOAD X	36	49	11.86	02	11.86	02	GLOB UNIF	WV	0	2
1196	LOAD Y	36	49	11.86-	42	11.86-	46	GLOB UNIF	WV	0	2
1197	LOAD Z	36	49	11.86	02	11.86	02	GLOB UNIF	WV	0	2
1198	LOAD X	36	49	23.72	02	11.86	02	GLOB UNIF	WV	0	2
1199	LOAD Y	36	49	23.72-	46	11.86-	53	GLOB UNIF	WV	0	2
1200	LOAD Z	36	49	23.72	02	11.86	02	GLOB UNIF	WV	0	2
1201	LOAD X	36	49	35.58	02	11.86	02	GLOB UNIF	WV	0	2
1202	LOAD Y	36	49	35.58-	53	11.86-	60	GLOB UNIF	WV	0	2
1203	LOAD Z	36	49	35.58	02	11.86	02	GLOB UNIF	WV	0	2
1204	LOAD X	38	51	0.00	06	9.29	07	GLOB UNIF	WV	0	2
1205	LOAD Y	38	51	0.00-	11	9.29-	13	GLOB UNIF	WV	0	2
1206	LOAD Z	38	51	0.00-	13	9.29-	15	GLOB UNIF	WV	0	2
1207	LOAD X	38	51	9.29	07	9.29	08	GLOB UNIF	WV	0	2
1208	LOAD Y	38	51	9.29-	13	9.29-	15	GLOB UNIF	WV	0	2
1209	LOAD Z	38	51	9.29-	15	9.29-	17	GLOB UNIF	WV	0	2
1210	LOAD X	38	51	18.57	08	9.29	09	GLOB UNIF	WV	0	2
1211	LOAD Y	38	51	18.57-	15	9.29-	17	GLOB UNIF	WV	0	2
1212	LOAD Z	38	51	18.57-	17	9.29-	19	GLOB UNIF	WV	0	2
1213	LOAD X	38	51	27.86	09	9.29	10	GLOB UNIF	WV	0	2
1214	LOAD Y	38	51	27.86-	17	9.29-	19	GLOB UNIF	WV	0	2
1215	LOAD Z	38	51	27.86-	19	9.29-	21	GLOB UNIF	WV	0	2
1216	LOAD X	38	51	37.14	10	9.29	11	GLOB UNIF	WV	0	2
1217	LOAD Y	38	51	37.14-	19	9.29-	22	GLOB UNIF	WV	0	2
1218	LOAD Z	38	51	37.14-	21	9.29-	24	GLOB UNIF	WV	0	2
1219	LOAD X	38	51	46.43	11	9.29	13	GLOB UNIF	WV	0	2
1220	LOAD Y	38	51	46.43-	22	9.29-	24	GLOB UNIF	WV	0	2
1221	LOAD Z	38	51	46.43-	24	9.29-	27	GLOB UNIF	WV	0	2
1222	LOAD X	34	53	0.00-	10	15.81-	11	GLOB UNIF	WV	0	2
1223	LOAD Y	34	53	0.00-	24	15.81-	27	GLOB UNIF	WV	0	2
1224	LOAD Z	34	53	0.00	16	15.81	17	GLOB UNIF	WV	0	2
1225	LOAD X	34	53	15.81-	11	15.81-	12	GLOB UNIF	WV	0	2
1226	LOAD Y	34	53	15.81-	27	15.81-	30	GLOB UNIF	WV	0	2
1227	LOAD Z	34	53	15.81	17	15.81	20	GLOB UNIF	WV	0	2
1228	LOAD X	34	53	31.62-	12	15.81-	13	GLOB UNIF	WV	0	2
1229	LOAD Y	34	53	31.62-	30	15.81-	33	GLOB UNIF	WV	0	2
1230	LOAD Z	34	53	31.62	20	15.81	22	GLOB UNIF	WV	0	2
1231	LOAD Y	55	58	0.00-	117	5.70-	130	GLOB UNIF	WV	0	2
1232	LOAD Y	55	58	5.70-	130	5.70-	146	GLOB UNIF	WV	0	2
1233	LOAD Y	55	58	11.40-	146	5.70-	163	GLOB UNIF	WV	0	2
1234	LOAD Y	55	58	17.10-	163	5.70-	185	GLOB UNIF	WV	0	2
1235	LOAD Y	55	58	22.80-	185	5.70-	210	GLOB UNIF	WV	0	2
1236	LOAD Y	58	61	0.00-	210	3.97-	229	GLOB UNIF	WV	0	2
1237	LOAD Y	58	61	3.97-	229	3.97-	248	GLOB UNIF	WV	0	2
1238	LOAD Y	58	61	7.95-	248	3.97-	275	GLOB UNIF	WV	0	2
1239	LOAD Y	56	59	0.00-	117	5.70-	130	GLOB UNIF	WV	0	2
1240	LOAD Y	56	59	5.70-	130	5.70-	146	GLOB UNIF	WV	0	2
1241	LOAD Y	56	59	11.40-	146	5.70-	163	GLOB UNIF	WV	0	2
1242	LOAD Y	56	59	17.10-	163	5.70-	185	GLOB UNIF	WV	0	2

LINE NO.	1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0										
1243	LOAD Y	56	59	22.80-	185	5.70-	210	GLOB UNIF	WV	0	2
1244	LOAD Y	59	64	0.00-	210	3.97-	229	GLOB UNIF	WV	0	2
1245	LOAD Y	59	64	3.97-	229	3.97-	248	GLOB UNIF	WV	0	2
1246	LOAD Y	59	64	7.95-	248	3.97-	275	GLOB UNIF	WV	0	2
1247	LOAD Y	57	60	0.00-	104	5.70-	116	GLOB UNIF	WV	0	2
1248	LOAD Y	57	60	5.70-	116	5.70-	129	GLOB UNIF	WV	0	2
1249	LOAD Y	57	60	11.40-	129	5.70-	144	GLOB UNIF	WV	0	2
1250	LOAD Y	57	60	17.10-	144	5.70-	163	GLOB UNIF	WV	0	2
1251	LOAD Y	57	60	22.80-	163	5.70-	183	GLOB UNIF	WV	0	2
1252	LOAD Y	60	70	0.00-	183	2.00-	192	GLOB UNIF	WV	0	2
1253	LOAD Y	60	70	2.00-	192	2.00-	201	GLOB UNIF	WV	0	2
1254	LOAD Y	60	70	4.00-	201	2.00-	209	GLOB UNIF	WV	0	2
1255	LOAD Y	70	67	0.00-	209	1.35-	215	GLOB UNIF	WV	0	2
1256	LOAD Y	70	67	1.35-	215	1.35-	223	GLOB UNIF	WV	0	2
1257	LOAD Y	70	67	2.71-	223	1.35-	231	GLOB UNIF	WV	0	2
1258	LOAD Y	58	59	0.00-	74	9.67-	74	GLOB UNIF	WV	0	2
1259	LOAD Y	58	59	9.67-	74	9.67-	74	GLOB UNIF	WV	0	2
1260	LOAD Y	58	59	19.33-	74	9.67-	74	GLOB UNIF	WV	0	2
1261	LOAD X	59	60	0.00	32	9.67	31	GLOB UNIF	WV	0	2
1262	LOAD Y	59	60	0.00-	19	9.67-	18	GLOB UNIF	WV	0	2
1263	LOAD X	59	60	9.67	31	9.67	30	GLOB UNIF	WV	0	2
1264	LOAD Y	59	60	9.67-	18	9.67-	17	GLOB UNIF	WV	0	2
1265	LOAD X	59	60	19.33	30	9.67	28	GLOB UNIF	WV	0	2
1266	LOAD Y	59	60	19.33-	17	9.67-	16	GLOB UNIF	WV	0	2
1267	LOAD X	60	58	0.00-	28	9.67-	30	GLOB UNIF	WV	0	2
1268	LOAD Y	60	58	0.00-	16	9.67-	17	GLOB UNIF	WV	0	2
1269	LOAD X	60	58	9.67-	30	9.67-	31	GLOB UNIF	WV	0	2
1270	LOAD Y	60	58	9.67-	17	9.67-	18	GLOB UNIF	WV	0	2
1271	LOAD X	60	58	19.33-	31	9.67-	32	GLOB UNIF	WV	0	2
1272	LOAD Y	60	58	19.33-	18	9.67-	19	GLOB UNIF	WV	0	2
1273	LOAD Y	59	61	0.00-	74	8.65-	81	GLOB UNIF	WV	0	2
1274	LOAD Y	59	61	8.65-	81	8.65-	88	GLOB UNIF	WV	0	2
1275	LOAD Y	59	61	17.29-	88	8.65-	97	GLOB UNIF	WV	0	2
1276	LOAD X	60	64	0.00	22	6.25	25	GLOB UNIF	WV	0	2
1277	LOAD Y	60	64	0.00-	26	6.25-	29	GLOB UNIF	WV	0	2
1278	LOAD Z	60	64	0.00-	23	6.25-	25	GLOB UNIF	WV	0	2
1279	LOAD X	60	64	6.25	25	6.25	27	GLOB UNIF	WV	0	2
1280	LOAD Y	60	64	6.25-	29	6.25-	32	GLOB UNIF	WV	0	2
1281	LOAD Z	60	64	6.25-	25	6.25-	28	GLOB UNIF	WV	0	2
1282	LOAD X	60	64	12.49	27	6.25	30	GLOB UNIF	WV	0	2
1283	LOAD Y	60	64	12.49-	32	6.25-	36	GLOB UNIF	WV	0	2
1284	LOAD Z	60	64	12.49-	28	6.25-	31	GLOB UNIF	WV	0	2
1285	LOAD X	60	64	18.74	30	6.25	33	GLOB UNIF	WV	0	2
1286	LOAD Y	60	64	18.74-	36	6.25-	39	GLOB UNIF	WV	0	2
1287	LOAD Z	60	64	18.74-	31	6.25-	34	GLOB UNIF	WV	0	2
1288	LOAD X	58	67	0.00-	25	7.69-	27	GLOB UNIF	WV	0	2
1289	LOAD Y	58	67	0.00-	30	7.69-	32	GLOB UNIF	WV	0	2
1290	LOAD Z	58	67	0.00	26	7.69	28	GLOB UNIF	WV	0	2
1291	LOAD X	58	67	7.69-	27	7.69-	28	GLOB UNIF	WV	0	2
1292	LOAD Y	58	67	7.69-	32	7.69-	34	GLOB UNIF	WV	0	2

```
                      1    1    2    2    3    3    4    4    5    5    6    6    7    7    8
LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0

   1293  LOAD Z   58  67    7.69     28   7.69     29                  GLOB UNIF     WV  0 2
   1294  LOAD X   58  67   15.38-    28   7.69-    30                  GLOB UNIF     WV  0 2
   1295  LOAD Y   58  67   15.38-    34   7.69-    36                  GLOB UNIF     WV  0 2
   1296  LOAD Z   58  67   15.38     29   7.69     31                  GLOB UNIF     WV  0 2
   1297  LOAD Y   70  66    0.00-    38   2.02-    40                  GLOB UNIF     WV  0 2
   1298  LOAD Y   70  66    2.02-    40   2.02-    41                  GLOB UNIF     WV  0 2
   1299  LOAD Y   70  66    4.04-    41   2.02-    43                  GLOB UNIF     WV  0 2
   1300  LOAD Y   70  68    0.00-    38   2.02-    40                  GLOB UNIF     WV  0 2
   1301  LOAD Y   70  68    2.02-    40   2.02-    41                  GLOB UNIF     WV  0 2
   1302  LOAD Y   70  68    4.04-    41   2.02-    43                  GLOB UNIF     WV  0 2
   1303  LOADCN    3
   1304  LOAD Z    1   4    0.00   -.557   6.06   -.557                GLOB UNIF     DL  0 3
   1305  LOAD Z    4  16    0.00   -.557  32.44   -.557                GLOB UNIF     DL  0 3
   1306  LOAD Z   16  28    0.00   -.403  32.44   -.403                GLOB UNIF     DL  0 3
   1307  LOAD Z   28  43    0.00   -.403  32.44   -.403                GLOB UNIF     DL  0 3
   1308  LOAD Z   43  55    0.00   -.403   4.59   -.403                GLOB UNIF     DL  0 3
   1309  LOAD Z    2   5    0.00   -.557   6.06   -.557                GLOB UNIF     DL  0 3
   1310  LOAD Z    5  17    0.00   -.557  32.44   -.557                GLOB UNIF     DL  0 3
   1311  LOAD Z   17  29    0.00   -.403  32.44   -.403                GLOB UNIF     DL  0 3
   1312  LOAD Z   29  44    0.00   -.403  32.44   -.403                GLOB UNIF     DL  0 3
   1313  LOAD Z   44  56    0.00   -.403   4.59   -.403                GLOB UNIF     DL  0 3
   1314  LOAD Z    3   6    0.00   -.557   6.07   -.557                GLOB UNIF     DL  0 3
   1315  LOAD Z    6  18    0.00   -.557  32.44   -.557                GLOB UNIF     DL  0 3
   1316  LOAD Z   18  30    0.00   -.403  32.58   -.403                GLOB UNIF     DL  0 3
   1317  LOAD Z   30  45    0.00   -.403  36.13   -.403                GLOB UNIF     DL  0 3
   1318  LOAD Z   45  57    0.00   -.403   4.58   -.403                GLOB UNIF     DL  0 3
   1319  LOAD Z   10  22    0.00   -.183  32.44   -.183                GLOB UNIF     DL  0 3
   1320  LOAD Z   22  34    0.00   -.183  32.44   -.183                GLOB UNIF     DL  0 3
   1321  LOAD Z   34  40    0.00   -.371  14.18   -.371                GLOB UNIF     DL  0 3
   1322  LOAD Z   40  49    0.00   -.371  18.26   -.371                GLOB UNIF     DL  0 3
   1323  LOAD Z   49  55    0.00   -.371   4.56   -.371                GLOB UNIF     DL  0 3
   1324  LOAD Z   12  24    0.00   -.183  32.44   -.183                GLOB UNIF     DL  0 3
   1325  LOAD Z   24  36    0.00   -.183  32.44   -.183                GLOB UNIF     DL  0 3
   1326  LOAD Z   36  41    0.00   -.371  14.18   -.371                GLOB UNIF     DL  0 3
   1327  LOAD Z   41  51    0.00   -.371  18.26   -.371                GLOB UNIF     DL  0 3
   1328  LOAD Z   51  56    0.00   -.371   4.56   -.371                GLOB UNIF     DL  0 3
   1329  LOAD Z   14  26    0.00   -.183  32.44   -.183                GLOB UNIF     DL  0 3
   1330  LOAD Z   26  38    0.00   -.183  32.58   -.183                GLOB UNIF     DL  0 3
   1331  LOAD Z   38  42    0.00   -.371  15.03   -.371                GLOB UNIF     DL  0 3
   1332  LOAD Z   42  53    0.00   -.371  21.26   -.371                GLOB UNIF     DL  0 3
   1333  LOAD Z   53  57    0.00   -.371   4.56   -.371                GLOB UNIF     DL  0 3
   1334  LOAD Z   10  11    1.71   -.081  25.58   -.081                GLOB UNIF     DL  0 3
   1335  LOAD Z   11  12    1.71   -.081  25.58   -.081                GLOB UNIF     DL  0 3
   1336  LOAD Z   12  13    1.71   -.081  25.58   -.081                GLOB UNIF     DL  0 3
   1337  LOAD Z   13  14    1.71   -.081  25.58   -.081                GLOB UNIF     DL  0 3
   1338  LOAD Z   14  15    1.71   -.081  25.58   -.081                GLOB UNIF     DL  0 3
   1339  LOAD Z   15  10    1.71   -.081  25.58   -.081                GLOB UNIF     DL  0 3
   1340  LOAD Z   11  13    1.41   -.047  26.17   -.047                GLOB UNIF     DL  0 3
   1341  LOAD Z   13  15    1.41   -.047  26.17   -.047                GLOB UNIF     DL  0 3
   1342  LOAD Z   15  11    1.41   -.047  26.17   -.047                GLOB UNIF     DL  0 3
```

LINE NO.	1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0									
1343	LOAD	Z	22	23	1.71	-.081	20.96	-.081	GLOB UNIF	DL 0 3
1344	LOAD	Z	23	24	1.71	-.081	20.96	-.081	GLOB UNIF	DL 0 3
1345	LOAD	Z	24	25	1.71	-.081	20.96	-.081	GLOB UNIF	DL 0 3
1346	LOAD	Z	25	26	1.71	-.081	20.96	-.081	GLOB UNIF	DL 0 3
1347	LOAD	Z	26	27	1.71	-.081	20.96	-.081	GLOB UNIF	DL 0 3
1348	LOAD	Z	27	22	1.71	-.081	20.96	-.081	GLOB UNIF	DL 0 3
1349	LOAD	Z	23	25	1.41	-.047	21.55	-.047	GLOB UNIF	DL 0 3
1350	LOAD	Z	25	27	1.41	-.047	21.55	-.047	GLOB UNIF	DL 0 3
1351	LOAD	Z	27	23	1.41	-.047	21.55	-.047	GLOB UNIF	DL 0 3
1352	LOAD	Z	34	35	1.71	-.057	16.35	-.057	GLOB UNIF	DL 0 3
1353	LOAD	Z	35	36	1.71	-.057	16.35	-.057	GLOB UNIF	DL 0 3
1354	LOAD	Z	36	37	1.71	-.057	16.35	-.057	GLOB UNIF	DL 0 3
1355	LOAD	Z	37	38	1.71	-.057	26.80	-.057	GLOB UNIF	DL 0 3
1356	LOAD	Z	38	32	1.71	-.057	26.80	-.057	GLOB UNIF	DL 0 3
1357	LOAD	Z	39	34	1.71	-.057	16.35	-.057	GLOB UNIF	DL 0 3
1358	LOAD	Z	35	37	1.71	-.043	16.35	-.043	GLOB UNIF	DL 0 3
1359	LOAD	Z	37	39	1.71	-.043	16.35	-.043	GLOB UNIF	DL 0 3
1360	LOAD	Z	39	35	1.71	-.043	16.35	-.043	GLOB UNIF	DL 0 3
1361	LOAD	Z	49	50	1.71	-.072	11.73	-.072	GLOB UNIF	DL 0 3
1362	LOAD	Z	50	51	1.71	-.072	11.73	-.072	GLOB UNIF	DL 0 3
1363	LOAD	Z	51	52	1.71	-.072	11.73	-.072	GLOB UNIF	DL 0 3
1364	LOAD	Z	52	53	1.71	-.072	11.73	-.072	GLOB UNIF	DL 0 3
1365	LOAD	Z	53	54	1.71	-.072	11.73	-.072	GLOB UNIF	DL 0 3
1366	LOAD	Z	54	49	1.71	-.072	11.73	-.072	GLOB UNIF	DL 0 3
1367	LOAD	Z	50	52	1.71	-.057	11.73	-.057	GLOB UNIF	DL 0 3
1368	LOAD	Z	52	54	1.71	-.057	11.72	-.057	GLOB UNIF	DL 0 3
1369	LOAD	Z	54	50	1.71	-.057	11.73	-.057	GLOB UNIF	DL 0 3
1370	LOAD	Z	11	22	1.71	-.072	36.90	-.072	GLOB UNIF	DL 0 3
1371	LOAD	Z	11	24	1.71	-.072	36.90	-.072	GLOB UNIF	DL 0 3
1372	LOAD	Z	13	24	1.71	-.072	36.89	-.072	GLOB UNIF	DL 0 3
1373	LOAD	Z	13	26	1.71	-.072	36.90	-.072	GLOB UNIF	DL 0 3
1374	LOAD	Z	15	26	1.71	-.072	36.90	-.072	GLOB UNIF	DL 0 3
1375	LOAD	Z	15	22	1.71	-.072	36.89	-.072	GLOB UNIF	DL 0 3
1376	LOAD	Z	22	36	2.42	-.112	49.76	-.112	GLOB UNIF	DL 0 3
1377	LOAD	Z	24	38	2.42	-.112	58.06	-.112	GLOB UNIF	DL 0 3
1378	LOAD	Z	26	34	2.42	-.112	49.76	-.112	GLOB UNIF	DL 0 3
1379	LOAD	Z	36	40	2.42	-.112	42.61	-.112	GLOB UNIF	DL 0 3
1380	LOAD	Z	38	51	2.42	-.112	50.89	-.112	GLOB UNIF	DL 0 3
1381	LOAD	Z	34	53	2.42	-.112	42.60	-.112	GLOB UNIF	DL 0 3
1382	LOAD	Z	4	7	0.00	-.148	2.40	-.148	GLOB UNIF	DL 0 3
1383	LOAD	Z	7	10	0.00	-.148	2.50	-.148	GLOB UNIF	DL 0 3
1384	LOAD	Z	5	8	0.00	-.148	2.40	-.148	GLOB UNIF	DL 0 3
1385	LOAD	Z	8	12	0.00	-.148	2.50	-.148	GLOB UNIF	DL 0 3
1386	LOAD	Z	6	9	0.00	-.148	2.40	-.148	GLOB UNIF	DL 0 3
1387	LOAD	Z	9	14	0.00	-.148	2.50	-.148	GLOB UNIF	DL 0 3
1388	LOAD	Z	16	19	0.00	-.148	2.40	-.148	GLOB UNIF	DL 0 3
1389	LOAD	Z	19	22	0.00	-.148	2.50	-.148	GLOB UNIF	DL 0 3
1390	LOAD	Z	17	20	0.00	-.148	2.40	-.148	GLOB UNIF	DL 0 3
1391	LOAD	Z	20	24	0.00	-.148	2.50	-.148	GLOB UNIF	DL 0 3
1392	LOAD	Z	18	21	0.00	-.148	2.40	-.148	GLOB UNIF	DL 0 3

LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0

1393	LOAD	Z	21	26	0.00	-.148	2.50	-.148	GLOB	UNIF	DL	0 3
1394	LOAD	Z	28	31	0.00	-.148	2.40	-.148	GLOB	UNIF	DL	0 3
1395	LOAD	Z	31	34	0.00	-.148	2.50	-.148	GLOB	UNIF	DL	0 3
1396	LOAD	Z	29	32	0.00	-.148	2.40	-.148	GLOB	UNIF	DL	0 3
1397	LOAD	Z	32	36	0.00	-.148	2.50	-.148	GLOB	UNIF	DL	0 3
1398	LOAD	Z	30	33	0.00	-.148	2.40	-.148	GLOB	UNIF	DL	0 3
1399	LOAD	Z	33	38	0.00	-.148	2.50	-.148	GLOB	UNIF	DL	0 3
1400	LOAD	Z	43	46	0.00	-.148	2.40	-.148	GLOB	UNIF	DL	0 3
1401	LOAD	Z	46	49	0.00	-.148	2.50	-.148	GLOB	UNIF	DL	0 3
1402	LOAD	Z	44	47	0.00	-.148	2.40	-.148	GLOB	UNIF	DL	0 3
1403	LOAD	Z	47	51	0.00	-.148	2.50	-.148	GLOB	UNIF	DL	0 3
1404	LOAD	Z	45	48	0.00	-.148	2.40	-.148	GLOB	UNIF	DL	0 3
1405	LOAD	Z	48	53	0.00	-.148	2.50	-.148	GLOB	UNIF	DL	0 3
1406	LOAD	Z	55	58	0.00	-.403	23.00	-.403	GLOB	UNIF	DL	0 3
1407	LOAD	Z	55	58	23.00	-.464	5.50	-.464	GLOB	UNIF	DL	0 3
1408	LOAD	Z	58	61	0.00	-.464	15.00	-.464	GLOB	UNIF	DL	0 3
1409	LOAD	Z	61	71	0.00	-.464	15.00	-.464	GLOB	UNIF	DL	0 3
1410	LOAD	Z	56	59	0.00	-.403	23.00	-.403	GLOB	UNIF	DL	0 3
1411	LOAD	Z	56	59	23.00	-.464	5.50	-.464	GLOB	UNIF	DL	0 3
1412	LOAD	Z	59	64	0.00	-.464	15.00	-.464	GLOB	UNIF	DL	0 3
1413	LOAD	Z	64	72	0.00	-.464	15.00	-.464	GLOB	UNIF	DL	0 3
1414	LOAD	Z	57	60	0.00	-.403	23.00	-.403	GLOB	UNIF	DL	0 3
1415	LOAD	Z	57	60	23.00	-.464	5.50	-.464	GLOB	UNIF	DL	0 3
1416	LOAD	Z	60	70	0.00	-.464	6.00	-.464	GLOB	UNIF	DL	0 3
1417	LOAD	Z	70	67	0.00	-.464	9.00	-.464	GLOB	UNIF	DL	0 3
1418	LOAD	Z	67	76	0.00	-.464	4.00	-.464	GLOB	UNIF	DL	0 3
1419	LOAD	Z	76	75	0.00	-.464	11.00	-.464	GLOB	UNIF	DL	0 3
1420	LOAD	Z	58	59	1.71	-.065	25.58	-.065	GLOB	UNIF	DL	0 3
1421	LOAD	Z	59	60	1.71	-.065	25.58	-.065	GLOB	UNIF	DL	0 3
1422	LOAD	Z	60	58	1.71	-.065	25.58	-.065	GLOB	UNIF	DL	0 3
1423	LOAD	Z	59	61	1.71	-.065	29.23	-.065	GLOB	UNIF	DL	0 3
1424	LOAD	Z	60	64	1.71	-.065	29.23	-.065	GLOB	UNIF	DL	0 3
1425	LOAD	Z	58	67	1.71	-.065	29.23	-.065	GLOB	UNIF	DL	0 3
1426	LOAD	Z	70	66	1.59	-.019	10.27	-.019	GLOB	UNIF	DL	0 3
1427	LOAD	Z	70	68	1.59	-.019	10.27	-.019	GLOB	UNIF	DL	0 3
1428	LOAD	Z	76	77	1.71	-.050	14.78	-.050	GLOB	UNIF	DL	0 3
1429	LOAD	Z	76	78	1.71	-.050	14.78	-.050	GLOB	UNIF	DL	0 3
1430	LOAD	Z	61	62	0.00	-.055	4.50	-.055	GLOB	UNIF	DL	0 3
1431	LOAD	Z	62	63	0.00	-.055	20.00	-.055	GLOB	UNIF	DL	0 3
1432	LOAD	Z	63	64	0.00	-.055	4.50	-.055	GLOB	UNIF	DL	0 3
1433	LOAD	Z	64	65	0.00	-.055	8.75	-.055	GLOB	UNIF	DL	0 3
1434	LOAD	Z	65	67	0.00	-.055	20.25	-.055	GLOB	UNIF	DL	0 3
1435	LOAD	Z	67	69	0.00	-.055	20.25	-.055	GLOB	UNIF	DL	0 3
1436	LOAD	Z	69	61	0.00	-.055	8.75	-.055	GLOB	UNIF	DL	0 3
1437	LOAD	Z	63	65	0.00	-.024	7.50	-.024	GLOB	UNIF	DL	0 3
1438	LOAD	Z	65	66	0.00	-.024	17.61	-.024	GLOB	UNIF	DL	0 3
1439	LOAD	Z	66	67	0.00	-.024	10.00	-.024	GLOB	UNIF	DL	0 3
1440	LOAD	Z	67	68	0.00	-.024	10.00	-.024	GLOB	UNIF	DL	0 3
1441	LOAD	Z	68	69	0.00	-.024	17.61	-.024	GLOB	UNIF	DL	0 3
1442	LOAD	Z	69	62	0.00	-.024	7.50	-.024	GLOB	UNIF	DL	0 3

```
                       1    1    2    2    3    3    4    4    5    5    6    6    7    7    8
LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0

     1443  LOAD Z   71  73    0.00  -.055   3.00  -.055             GLOB UNIF    DL 0 3
     1444  LOAD Z   71  72    0.00  -.055  29.00  -.055             GLOB UNIF    DL 0 3
     1445  LOAD Z   72  74    0.00  -.055   3.00  -.055             GLOB UNIF    DL 0 3
     1446  LOAD Z   71  81    0.00  -.055   5.00  -.055             GLOB UNIF    DL 0 3
     1447  LOAD Z   71  77    0.00  -.055  25.11  -.055             GLOB UNIF    DL 0 3
     1448  LOAD Z   77  83    0.00  -.055   5.00  -.055             GLOB UNIF    DL 0 3
     1449  LOAD Z   72  82    0.00  -.055   5.00  -.055             GLOB UNIF    DL 0 3
     1450  LOAD Z   72  78    0.00  -.055  25.11  -.055             GLOB UNIF    DL 0 3
     1451  LOAD Z   78  84    0.00  -.055   5.00  -.055             GLOB UNIF    DL 0 3
     1452  LOAD Z   77  79    0.00  -.055   3.00  -.055             GLOB UNIF    DL 0 3
     1453  LOAD Z   77  75    0.00  -.055  14.50  -.055             GLOB UNIF    DL 0 3
     1454  LOAD Z   75  78    0.00  -.055  14.50  -.055             GLOB UNIF    DL 0 3
     1455  LOAD Z   78  80    0.00  -.055   3.00  -.055             GLOB UNIF    DL 0 3
     1456  LOAD Z   71  75    0.00  -.016  29.00  -.016             GLOB UNIF    DL 0 3
     1457  LOAD Z   72  75    0.00  -.016  29.00  -.016             GLOB UNIF    DL 0 3
     1458  END
```

```
NO. OF WARNING ERRORS =  67

NO. OF FATAL ERRORS =   0


*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER=   1     JS=   1     JE=   4

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER=   2     JS=   4     JE=  16

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER=   3     JS=  16     JE=  28

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER=   4     JS=  28     JE=  43

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER=   5     JS=  43     JE=  55

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER=   6     JS=   2     JE=   5

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER=   7     JS=   5     JE=  17

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER=   8     JS=  17     JE=  29

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER=   9     JS=  29     JE=  44

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER=  10     JS=  44     JE=  56

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
```

```
MEMBER=  11     JS=   3     JE=   6

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER=  12     JS=   6     JE=  18

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER=  13     JS=  18     JE=  30

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER=  14     JS=  30     JE=  45

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER=  15     JS=  45     JE=  57

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER=  79     JS=   4     JE=   7

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER=  80     JS=   7     JE=  10

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER=  81     JS=   5     JE=   9

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER=  82     JS=   8     JE=  12

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER=  83     JS=   6     JE=   9

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER=  84     JS=   9     JE=  14

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER=  85     JS=  16     JE=  19

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER=  86     JS=  19     JE=  22

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER=  87     JS=  17     JE=  20
```

```
*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER=  88      JS=  20      JE=  24

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER=  89      JS=  18      JE=  21

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER=  90      JS=  21      JE=  26

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER=  91      JS=  28      JE=  31

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER=  92      JS=  31      JE=  34

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER=  93      JS=  29      JE=  32

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER=  94      JS=  32      JE=  36

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER=  95      JS=  30      JE=  33

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER=  96      JS=  33      JE=  38

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER=  97      JS=  43      JE=  46

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER=  98      JS=  46      JE=  49

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER=  99      JS=  44      JE=  47

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER= 100      JS=  47      JE=  51
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```
*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER= 101     JS=  45     JE=  48

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER= 102     JS=  48     JE=  55

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER= 124     JS=  61     JE=  62

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER= 125     JS=  62     JE=  63

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER= 126     JS=  63     JE=  64

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER= 127     JS=  64     JE=  65

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER= 128     JS=  65     JE=  67

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER= 129     JS=  67     JE=  69

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER= 130     JS=  69     JE=  61

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER= 131     JS=  63     JE=  65

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER= 132     JS=  65     JE=  66

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER= 133     JS=  66     JE=  67

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER= 134     JS=  67     JE=  68

*** WARNING NO. SL. 7 ***
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```
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
MEMBER= 135     JS=  68      JE=  69

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER= 136     JS=  69      JE=  62

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER= 137     JS=  71      JE=  73

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER= 138     JS=  71      JE=  72

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER= 139     JS=  72      JE=  74

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER= 140     JS=  71      JE=  81

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER= 141     JS=  71      JE=  77

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER= 142     JS=  77      JE=  83

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER= 143     JS=  72      JE=  82

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER= 144     JS=  72      JE=  78

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER= 145     JS=  78      JE=  84

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER= 146     JS=  77      JE=  79

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER= 147     JS=  77      JE=  75

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
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MEMBER= 148     JS=  75     JF=  78

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER= 149     JS=  78     JF=  80

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER= 150     JS=  71     JF=  75

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER= 151     JS=  72     JF=  75
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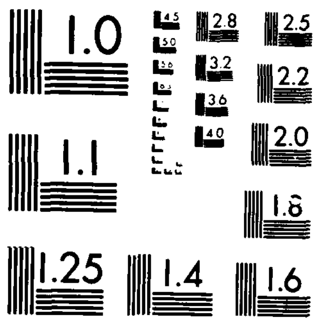
AD-A164 421 STRUCTURAL CONCEPT ANALYSIS REPORT FOR THE EAST COAST AIR COMBAT MANEUVER..(U) CREST ENGINEERING INC TULSA OK MAY 76 27-771-92-APP-C CHES/NAVFAC-FPO-7601-APP-C 6/7

UNCLASSIFIED N62477-76-C-0179 F/G 13/13 NL



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

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JYJZCFT.   04/26/76. *UNITED COMPUTING* 67. APEX/SL . H.0.25

17.16.50$SEALOAD.CM100,T500,RT.
17.16.50$FL      64     0.000
17.16.50$AC3400C8A0023,2777100CC )H
17.16.50. 04/26/76.JYJZCFT
17.16.51$FL    3392     0.001
17.16.51.GET,TAPE26=SPFILE(LIBRARY)
17.16.52.READY =   SPFILE
17.16.52.GET,SL2(LIBRARY)
17.17.02.READY =   SL2
17.17.02.RFL,130000.
17.17.02$FL     4096    0.001         0        0.
17.17.02$FI      934        2
17.17.02.SL2.
17.17.02$FLS  45056     0.001
17.17.04$FLA  45056     0.440       413       16
17.17.04.FL REQUIRED TO LOAD      73660B ( 30640)
17.17.04.FL REQUIRED TO EXECUTE   63600B ( 26496)
17.17.05$FL   45056     0.440
17.17.06.$SC SSL2 START SEALOAD
17.17.32.$SC SSL2 STOP SEALOAD
17.17.32.STOP
17.17.32$SB*  45056    10.514      2015      177.
17.17.32$FI      30         2
17.17.32.REPLACE,TAPE9=S771C1.
17.17.34.READY =   S771C1
17.17.34.COST.
17.17.34$FL    4096    10.514         0        0.
17.17.34$FI     208         1
17.17.35.             SERVICE UNITS=      46.2
17.17.35.             JOB COST=$       11.55
17.17.35$FL   12288    10.537         9        5
17.17.35.EXIT.
17.17.35$JT00  2368    10.537
17.17.35.    *FL* *CPU SEC. *DISC PRUS* DISC ACC
17.17.35.*P.F. PRUS*P.F. ACC *TAPE PRUS* TAPE ACC
```

A-5 SPACE FRAME ANALYSIS

UNITED COMPUTING 67, APEX/SL, 8,0,25

11.2?.29.   04/27/76.

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JJJJJJJJJJJJ  YY        YY  JJJJJJJJJJJJ     OOOOOOOO      CCCCCCCCCC   ZZZZZZZZZZZZ   SSSSSSSSSS
JJJJJJJJJJJJ  YY        YY  JJJJJJJJJJJJ   OO        OO  CCCCCCCCCCCC   ZZZZZZZZZZZZ  SSSSSSSSSSSS
     JJ       YY        YY        JJ       OO        OO  CC        CC  Z          ZZ  SS          S
     JJ       YY        YY        JJ       OO        OO  CC                      ZZ   SS
     JJ       YY        YY        JJ       OO        OO  CC                     ZZ    SS
     JJ       YY        YY        JJ       OO        OO  CC                    ZZ     SS
     JJ       YYY      YYY        JJ       OO        OO  CC                   ZZ      SS
     JJ         YYY  YYY          JJ       OO        OO  CC               ZZZZZZZZ    SSSSSSSSSSS
     JJ           YYYY            JJ       OO        OO  CC                 ZZ          SSSSSSSSSSS
     JJ            YY             JJ       OO        OO  CC                ZZ                    SS
     JJ            YY             JJ       OO        OO  CC               ZZ                     SS
     JJ            YY             JJ       OO        OO  CC              ZZ                      SS
     JJ            YY             JJ       OO        OO  CC             ZZ                       SS
JJ   JJ            YY        JJ   JJ       OO        OO  CC        CC  ZZ          Z  S          SS
JJJJJJJ            YY        JJJJJJJ        OO      OO   CCCCCCCCCCCC  ZZZZZZZZZZZZ   SSSSSSSSSSSS
 JJJJJ             YY         JJJJJ          OOOOOOOO      CCCCCCCCCC  ZZZZZZZZZZZZ    SSSSSSSSSS
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*****************************************
*                 STRAN                 *
* A SYNERCOM TECHNOLOGY, INC. DEVELOPMENT *
*           RELEASE 6  MOD 12           *
*              MARCH 1976               *
*                                       *
*****************************************

                                                                                DATE   04/27/76
        3-PILE ACMR STRUCTURE -- U.S. NAVY  (36-IN. DIAMETER PILING) -- C.CHERN

                            ***PROGRAM OPTIONS***

THE FOLLOWING OPTIONS HAVE BEEN REQUESTED FOR THIS ANALYSIS

INPUT
      ....CARD PLUS DATA FILE INPUT

INPUT UNITS
      ....ENGLISH

OUTPUT UNITS
      ....ENGLISH

EXECUTION
      ....UNITY CHECK
        ..UNITY CHECKS COMPUTED BY AMERICAN INSTITUTE OF
          STEEL CONSTRUCTION 1969 CODE, SECTIONS 1.5, 1.6,
          LOCAL BUCKLING STRESS OF TUBULAR MEMBERS INVES-
          TIGATED BY COLUMN RESEARCH COUNCIL METHOD,
          RESULTS INVALID FOR A514 STEEL.
      ....NO. OF SEGMENTS              1
      ....VARBL MEMB, SEGMENTS/SECT 1

LOAD
      ....NO. BASIC LOAD CONDS.        6
      ....NO. COMBINED LOAD CONDS.     2

REPORT
      ....INPUT ECHO AND GROUP PROP         PRINT
      ....JOINT DEFLECTIONS                 PRINT
      ....GROUP AND UN CHK SUMMARY          PRINT
      ....MEMBER STRESS REPORT NO.   1      PRINT
      ....MEMBER STRESS REPORT NO.   2      PRINT
      ....MEMBER STRESS REPORT NO.   3      PRINT
      ....REACTION FORCES AND MOMTS         PRINT
      ....EQUILIBRIUM CHECK                 PRINT

EQUILIBRIUM CHECK EDIT VALUES
      ....FORCES     100.00 LB
      ....MOMENTS    100.00 IN-LB
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. . . . P R O P E R T I E S   R E P O R T

PAGE 1
DATE 04/27/76

3-PILE ACCR STRUCTURE -- .S. NAVY (36-I . DIAMETER PILING) -- C.CHERN
TABULAR OF MEMBER PROPERTIES

GRP	M/S	JOINT THICK FT.	WT IN.	OD IN.	AX IN2	IX IN4	IY IN4	IZ IN4	FY KSI	KY	KZ	SHEAR AREA IN2	INPUT SEC LEN FT.
*** E = 29000000.0 PSI, G = 11600000.0 PSI ***													
P10	1	-0.00	1.750	36.00	188.30	55366.00	27683.00	27683.00	36.0	1.0	1.0	188.30	-0.00
P20	1	-0.00	1.250	36.00	136.46	41250.28	20625.14	20625.14	36.0	1.0	1.0	136.46	-0.00
JL1	1	-0.00	.500	40.00	62.05	24205.92	12102.96	12102.96	36.0	1.0	1.0	62.05	-0.00
JL2	1	-0.00	1.000	41.00	125.66	50297.02	25148.51	25148.51	36.0	1.0	1.0	125.66	-0.00
RR1	2	4.83	.625	20.00	38.04	3574.08	1787.04	1787.04	36.0	.8	.8	38.04	-0.00
RR2	2	3.42	.500	18.00	27.49	2106.32	1053.16	1053.16	36.0	.8	.8	27.49	-0.00
RR3	2	3.42	.500	16.00	24.35	1463.86	731.93	731.93	36.0	.8	.8	24.35	-0.00
RR4	2	2.83	.375	14.00	16.05	745.60	372.80	372.80	36.0	.8	.8	16.05	-0.00
RR5	2	3.42	.500	12.75	19.24	723.28	361.64	361.64	36.0	.8	.8	19.24	-0.00
RR6	2	3.42	.375	12.75	14.58	558.82	279.41	279.41	36.0	.8	.8	14.58	-0.00
RH7	2	3.18	.280	6.63	5.58	56.30	28.15	28.15	36.0	.8	.8	5.58	-0.00
STL	1	-0.00	1.250	36.00	136.46	41250.28	20625.14	20625.14	36.0	1.0	1.0	136.46	-0.00

3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN
WIDE FLANGE/WIDE FLANGE COMPACT MEMBER PROPERTIES

GRP	M/S	JOINT THICK FT.	FLANGE THICK IN.	FLANGE WIDTH IN.	WEB THICK IN.	FILET RADIUS IN.	DEPTH IN.	AX IN2	IX IN4	IY IN4	IZ IN4	FY KSI	KY	KZ	LB FT.	INPUT SEC LEN FT.
*** E = 29000000.0 PSI, G = 11600000.0 PSI ***																
W18	1	-0.00	.570	7.50	.358	.500	18.00	16.20	1.25	802.00	40.20	36.0	1.0	1.0	.01	-0.00
W08	1	-0.00	.398	6.50	.245	.500	7.93	7.06	.34	82.50	18.20	36.0	1.0	1.0	.01	-0.00
W06	1	-0.00	.269	6.00	.235	.500	6.00	4.56	.11	30.10	9.67	36.0	1.0	1.0	.01	-0.00

STRAN - GROUP PROPERTIES REPORT

PAGE 3
DATE 04/27/76

3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERU
PRISMATIC SECTION MEMBERS

GRP	M/S	JOINT THICK FT.	Z-DPTH IN.	Y-DPTH IN.	AX IN2	IX IN4	IY IN4	IZ IN4	FY KSI	KY	KZ	INPUT SEC LEN FT.
*** E = 29000000.0 PSI, G = 11600000.0 PSI ***												
WAN	2	-0.00	10.00	5.00	50.00	30000.00	30000.00	30000.00	36.0	1.0	1.0	-0.00

S T R A I N P U T D A T A

PAGE 1
DATE 04/27/76

3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

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                  1    1    2    2    3    3    4    4    5    5    6    6    7    7    8
LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0

  1  SECT
  2  SECT PILING1   TUB 18830 5536600 2768300 2768300   3600 1750
  3  SECT PILING2   TUB 13646 4125028 2062514 2062514   3600 1250
  4  SECT JKTLEG1   TUB  6205 2420592 1210296 1210296   4000  500
  5  SECT JKTLEG2   TUB 12566 5029702 2514851 2514851   4100 1000
  6  SECT BRACES1   TUB  3804  357408  178704  178704   2000  625
  7  SECT BRACES2   TUB  2749  210632  105316  105316   1800  500
  8  SECT BRACES3   TUB  2435  146386   73193   73193   1600  500
  9  SECT BRACES4   TUB  1605   74560   37280   37280   1400  375
 10  SECT BRACES5   TUB  1924   72328   36164   36164   1275  500
 11  SECT BRACES6   TUB  1458   55882   27941   27941   1275  375
 12  SECT BRACES7   TUB   558    5630    2815    2815  6.625  280
 13  SECT WISHBON   PRT  5000 3000000 3000000 3000000   1000            500
 14  SECT SUSTLEG   TUB 13646 4125028 2062514 2062514   3600 1250
 15  SECT W18X50    WFC  1620     125   80200    4020    750  570  1800  358   50
 16  SECT W8X24     WFC   706      34    8250    1820    650  398   793  245   50
 17  SECT W6X15     WFC   456      11    3010     967    600  269   600  235   50
 18  GRUP
 19  GRUP P10 PILING1   3600   1750   2900 1160 3600 1
 20  GRUP P20 PILING2   3600   1250   2900 1160 3600 1
 21  GRUP JL1 JKTLEG1   4000    500   2900 1160 3600 1
 22  GRUP JL2 JKTLEG2   4100   1000   2900 1160 3600 1
 23  GRUP BR1 BRACES1   2000    625   2900 1160 3600 2 483   8    8
 24  GRUP BR2 BRACES2   1800    500   2900 1160 3600 2 342   8    8
 25  GRUP BR3 BRACES3   1600    500   2900 1160 3600 2 342   8    8
 26  GRUP BR4 BRACES4   1400    375   2900 1160 3600 2 283   8    8
 27  GRUP BR5 BRACES5   1275    500   2900 1160 3600 2 342   8    8
 28  GRUP BR6 BRACES6   1275    375   2900 1160 3600 2 342   8    8
 29  GRUP BR7 BRACES7  6.625    280   2900 1160 3600 2 318   8    8
 30  GRUP WBN WISHBON                 2900 1160 3600 2                01
 31  GRUP STL SUSTLEG   3600   1250   2900 1160 3600 1
 32  GRUP W18 W18X50                  2900 1160 3600 1                01
 33  GRUP W08 W8X24                   2900 1160 3600 1                01
 34  GRUP W06 W6X15                   2900 1160 3600 1                01
 35  MEMBER
 36  MEMBER    1   4 P10                                                    F   0000 1
 37  MEMBER    4  16 P10                                                    F   0000 1
 38  MEMBER   16  28 P20                                                    F   0000 1
 39  MEMBER   28  43 P20                                                    F   0000 1
 40  MEMBER   43  55 P20                                                    F   0000 1
 41  MEMBER    2   5 P10                                                    F   0000 2
 42  MEMBER    5  17 P10                                                    F   0000 2
 43  MEMBER   17  29 P20                                                    F   0000 2
 44  MEMBER   29  44 P20                                                    F   0000 2
 45  MEMBER   44  56 P20                                                    F   0000 2
 46  MEMBER    3   6 P10                                                    F   0000 3
 47  MEMBER    6  18 P10                                                    F   0000 3
 48  MEMBER   18  30 P20                                                    F   0000 3
 49  MEMBER   30  45 P20                                                    F   0000 3
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S T R U D L   I N P U T   D A T A

$-PILE ACHR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

LINE NO.	1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0					
50	MEMBER	45	57	P20	F	0000 3
51	MEMBER	10	22	JL1	F	4000
52	MEMBER	22	34	JL1	F	4000
53	MEMBER	34	40	JL2	F	4100
54	MEMBER	40	49	JL2	F	4100
55	MEMBER	49	55	JL2	F	4100
56	MEMBER	12	24	JL1	F	4000
57	MEMBER	24	36	JL1	F	4000
58	MEMBER	36	41	JL2	F	4100
59	MEMBER	41	51	JL2	F	4100
60	MEMBER	51	56	JL2	F	4100
61	MEMBER	14	26	JL1	F	4000
62	MEMBER	26	38	JL1	F	4000
63	MEMBER	38	42	JL2	F	4100
64	MEMBER	42	53	JL2	F	4100
65	MEMBER	53	57	JL2	F	4100
66	MEMBER	10	11	BR2		1800
67	MEMBER	11	12	BR2		1800
68	MEMBER	12	13	BR2		1800
69	MEMBER	13	14	BR2		1800
70	MEMBER	14	15	BR2		1800
71	MEMBER	15	10	BR2		1800
72	MEMBER	11	13	BR4		1400
73	MEMBER	13	15	BR4		1400
74	MEMBER	15	11	BR4		1400
75	MEMBER	22	23	BR2		1800
76	MEMBER	23	24	BR2		1800
77	MEMBER	24	25	BR2		1800
78	MEMBER	25	26	BR2		1800
79	MEMBER	26	27	BR2		1800
80	MEMBER	27	22	BR2		1800
81	MEMBER	23	25	BR4		1400
82	MEMBER	25	27	BR4		1400
83	MEMBER	27	23	BR4		1400
84	MEMBER	34	35	BR5		1275
85	MEMBER	35	36	BR5		1275
86	MEMBER	36	37	BR5		1275
87	MEMBER	37	38	BR5		1275
88	MEMBER	38	39	BR5		1275
89	MEMBER	39	34	BR5		1275
90	MEMBER	35	37	BR6		1275
91	MEMBER	37	39	BR6		1275
92	MEMBER	39	35	BR6		1275
93	MEMBER	49	50	BR3		1600
94	MEMBER	50	51	BR3		1600
95	MEMBER	51	52	BR3		1600
96	MEMBER	52	53	BR3		1600
97	MEMBER	53	54	BR3		1600
98	MEMBER	54	49	BR3		1600

S T R A [illegible]   I N P U T   D A T A

3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILINGS) -- C.CHERN

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                1    1    2    2    3    3    4    4    5    5    6    6    7    7    8
LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0
```

LINE NO.							
99	MEMBER	50	52	BR5			1275
100	MEMBER	52	54	BR5			1275
101	MEMBER	54	50	BR5			1275
102	MEMBER	11	22	BR3			1600
103	MEMBER	11	24	BR3			1600
104	MEMBER	13	24	BR3			1600
105	MEMBER	13	26	BR3			1600
106	MEMBER	15	26	BR3			1600
107	MEMBER	15	22	BR3			1600
108	MEMBER	22	36	BR1			2000
109	MEMBER	24	38	BR1			2000
110	MEMBER	26	34	BR1			2000
111	MEMBER	36	49	BR1			2000
112	MEMBER	38	51	BR1			2000
113	MEMBER	34	53	BR1			2000
114	MEMBER	4	7	WBN	1111	F	0000
115	MEMBER	7	10	WBN		F	0000
116	MEMBER	5	8	WBN	1111	F	0000
117	MEMBER	8	12	WBN		F	0000
118	MEMBER	6	9	WBN	1111	F	0000
119	MEMBER	9	14	WBN		F	0000
120	MEMBER	16	19	WBN	1111	F	0000
121	MEMBER	19	22	WBN		F	0000
122	MEMBER	17	20	WBN	1111	F	0000
123	MEMBER	20	24	WBN		F	0000
124	MEMBER	18	21	WBN	1111	F	0000
125	MEMBER	21	26	WBN		F	0000
126	MEMBER	28	31	WBN	1111	F	0000
127	MEMBER	31	34	WBN		F	0000
128	MEMBER	29	32	WBN	1111	F	0000
129	MEMBER	32	36	WBN		F	0000
130	MEMBER	30	33	WBN	1111	F	0000
131	MEMBER	33	38	WBN		F	0000
132	MEMBER	43	46	WBN	1111	F	0000
133	MEMBER	46	49	WBN		F	0000
134	MEMBER	44	47	WBN	1111	F	0000
135	MEMBER	47	51	WBN		F	0000
136	MEMBER	45	48	WBN	1111	F	0000
137	MEMBER	48	53	WBN		F	0000
138	MEMBER	55	58	STL			3600
139	MEMBER	58	61	STL			3600
140	MEMBER	61	71	STL			3600
141	MEMBER	56	59	STL			3600
142	MEMBER	59	64	STL			3600
143	MEMBER	64	72	STL			3600
144	MEMBER	57	60	STL			3600
145	MEMBER	60	70	STL			3600
146	MEMBER	70	67	STL			3600
147	MEMBER	67	76	STL			3600

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3-PILE ACTR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

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LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0
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LINE NO.									
148	MEMBER	76	75 STL						3600
149	MEMBER	58	59 BR5						1275
150	MEMBER	59	60 BR5						1275
151	MEMBER	60	58 BR5						1275
152	MEMBER	59	61 BR5						1275
153	MEMBER	60	64 BR5						1275
154	MEMBER	58	67 BR5						1275
155	MEMBER	76	66 BR7						6.625
156	MEMBER	76	68 BR7						6.625
157	MEMBER	76	77 BR6						1275
158	MEMBER	76	78 BR6						1275
159	MEMBER	61	62 W18						0000
160	MEMBER	62	63 W18						0000
161	MEMBER	63	64 W18						0000
162	MEMBER	64	65 W18						0000
163	MEMBER	65	67 W18						0000
164	MEMBER	67	69 W18						0000
165	MEMBER	69	61 W18						0000
166	MEMBER	63	65 W08						0000
167	MEMBER	65	66 W08						0000
168	MEMBER	66	67 W08						0000
169	MEMBER	67	68 W08						0000
170	MEMBER	68	69 W08						0000
171	MEMBER	69	62 W08						0000
172	MEMBER	71	73 W18						0000
173	MEMBER	71	72 W18						0000
174	MEMBER	72	74 W18						0000
175	MEMBER	71	81 W18						0000
176	MEMBER	71	77 W18						0000
177	MEMBER	77	83 W18						0000
178	MEMBER	72	82 W18						0000
179	MEMBER	72	78 W18						0000
180	MEMBER	78	84 W18						0000
181	MEMBER	77	79 W18						0000
182	MEMBER	77	75 W18						0000
183	MEMBER	75	78 W18						0000
184	MEMBER	78	80 W18						0000
185	MEMBER	71	75 W06						0000
186	MEMBER	72	75 W06						0000
187	JOINT								
188	JOINT	1	2987	-1725	-600	111	PILING A		
189	JOINT	2	-2987	-1725	-600	111	PILING B		
190	JOINT	3	000	3449	-600	111	PILING C		
191	JOINT	4	2910	-1684	0		MUDLINE		
192	JOINT	5	-2910	-1684	0		MUDLINE		
193	JOINT	6	0	3359	0		MUDLINE		
194	JOINT	7	2900	-1924	0		MUDLINE		
195	JOINT	8	-2900	-1924	0		MUDLINE		
196	JOINT	9	0	3599	0		MUDLINE		

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3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

```
LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0
                  1    1    2    2    3    3    4    4    5    5    6    6    7    7    8

197  JOINT  10   2900  -1674      0                          MUDLINE
198  JOINT  11      0  -1674      0                          MUDLINE
199  JOINT  12    -29  -1674      0                          MUDLINE
200  JOINT  13  -1450    837      0                          MUDLINE
201  JOINT  14      0   3349      0                          MUDLINE
202  JOINT  15   1450    837      0                          MUDLINE
203  JOINT  16   2447  -1417   3200                          1 LEVEL
204  JOINT  17  -2447  -1417   3200                          1 LEVEL
205  JOINT  18      0   2825   3200                          1 LEVEL
206  JOINT  19   2438  -1657   3200                          1 LEVEL
207  JOINT  20  -2438  -1657   3200                          1 LEVEL
208  JOINT  21      0   3065   3200                          1 LEVEL
209  JOINT  22   2438  -1407   3200                          1 LEVEL
210  JOINT  23      0  -1407   3200                          1 LEVEL
211  JOINT  24  -2438  -1407   3200                          1 LEVEL
212  JOINT  25  -1219    704   3200                          1 LEVEL
213  JOINT  26      0   2815   3200                          1 LEVEL
214  JOINT  27   1219    704   3200                          1 LEVEL
215  JOINT  28   1987  -1151   6400                          2 LEVEL
216  JOINT  29  -1987  -1151   6400                          2 LEVEL
217  JOINT  30      0   3437   6400                          2 LEVEL
218  JOINT  31   1977  -1391   6400                          2 LEVEL
219  JOINT  32  -1977  -1391   6400                          2 LEVEL
220  JOINT  33      0   3677   6400                          2 LEVEL
221  JOINT  34   1977  -1141   6400                          2 LEVEL
222  JOINT  35      0  -1141   6400                          2 LEVEL
223  JOINT  36  -1977  -1141   6400                          2 LEVEL
224  JOINT  37   -988    571   6400                          2 LEVEL
225  JOINT  38      0   3427   6400                          2 LEVEL
226  JOINT  39    988    571   6400                          2 LEVEL
227  JOINT  40   1774  -1040   7800                          BOAT LOG
228  JOINT  41  -1774  -1040   7800                          BOAT LOG
229  JOINT  42      0   2880   7800                          BOAT LOG
230  JOINT  43   1525   -885   9600                          3 LEVEL
231  JOINT  44  -1525   -885   9600                          3 LEVEL
232  JOINT  45      0   1759   9600                          3 LEVEL
233  JOINT  46   1515  -1125   9600                          3 LEVEL
234  JOINT  47  -1515  -1125   9600                          3 LEVEL
235  JOINT  48      0   1999   9600                          3 LEVEL
236  JOINT  49   1515   -875   9600                          3 LEVEL
237  JOINT  50      0   -875   9600                          3 LEVEL
238  JOINT  51  -1515   -875   9600                          3 LEVEL
239  JOINT  52   -757    437   9600                          3 LEVEL
240  JOINT  53      0   1749   9600                          3 LEVEL
241  JOINT  54    757    437   9600                          3 LEVEL
242  JOINT  55   1450   -837  10050                          WP LEVEL
243  JOINT  56  -1450   -837  10050                          WP LEVEL
244  JOINT  57      0   1674  10050                          WP LEVEL
245  JOINT  58   1450   -837  12900                          ST BRACE
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3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

```
                    1    1    2    2    3    3    4    4    5    5    6    6    7    7    8
LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0

 246  JOINT   59  -1450   -837  12900                          ST BRACE
 247  JOINT   60      0   1674  12900                          ST BRACE
 248  JOINT   61   1450   -837  14400                          EQT DECK
 249  JOINT   62   1000   -837  14400                          EQT DECK
 250  JOINT   63  -1000   -837  14400                          EQT DECK
 251  JOINT   64  -1450   -837  14400                          EQT DECK
 252  JOINT   65  -1000   -837  14400                          EQT DECK
 253  JOINT   66  -1000   1674  14400                          EQT DECK
 254  JOINT   67      0   1674  14400                          EQT DECK
 255  JOINT   68   1000   1674  14400                          EQT DECK
 256  JOINT   69   1000   -837  14400                          EQT DECK
 257  JOINT   70      0   1674  13500                          BRACE PT
 258  JOINT   71   1450   -837  15900                          TOP DECK
 259  JOINT   72  -1450   -837  15900                          TOP DECK
 260  JOINT   73   1750   -837  15900                          TOP DECK
 261  JOINT   74  -1750   -837  15900                          TOP DECK
 262  JOINT   75      0   1674  15900                          TOP DECK
 263  JOINT   76      0   1674  14800                          BRACE PT
 264  JOINT   77   1450   1674  15900                          TOP DECK
 265  JOINT   78  -1450   1674  15900                          TOP DECK
 266  JOINT   79   1750   1674  15900                          TOP DECK
 267  JOINT   80  -1750   1674  15900                          TOP DECK
 268  JOINT   81   1450  -1337  15900                          TOP DECK
 269  JOINT   82  -1450  -1337  15900                          TOP DECK
 270  JOINT   83   1450   2174  15900                          TOP DECK
 271  JOINT   84  -1450   2174  15900                          TOP DECK
 272  LOAD
 273  LOADCN   1
 274  LOAD Y   43  55   4.08    345                            GLOB CONC   WN 1 1
 275  LOAD X   43  55                           4.08-244106 GLOB MOMT   WN 1 1
 276  LOAD Y   44  56   4.08    345                            GLOB CONC   WN 1 1
 277  LOAD X   44  56                           4.08-244106 GLOB MOMT   WN 1 1
 278  LOAD Y   45  57   4.07    345                            GLOB CONC   WN 1 1
 279  LOAD X   45  57                           4.07-244106 GLOB MOMT   WN 1 1
 280  LOAD Y   43  55   4.08   1111                            GLOB CONC   WN 2 1
 281  LOAD X   43  55                           4.08-653247 GLOB MOMT   WN 2 1
 282  LOAD Y   44  56   4.08   1111                            GLOB CONC   WN 2 1
 283  LOAD X   44  56                           4.08-653247 GLOB MOMT   WN 2 1
 284  LOAD Y   45  57   4.07   1111                            GLOB CONC   WN 2 1
 285  LOAD X   45  57                           4.07-653247 GLOB MOMT   WN 2 1
 286  LOAD X   10  22   0.00      1  10.81    1                GLOB UNIF   WV 0 1
 287  LOAD Y   10  22   0.00     47  10.81   48                GLOB UNIF   WV 0 1
 288  LOAD Z   10  22   0.00-    04  10.81-  04                GLOB UNIF   WV 0 1
 289  LOAD X   10  22  10.81      1  10.81    1                GLOB UNIF   WV 0 1
 290  LOAD Y   10  22  10.81     48  10.81   50                GLOB UNIF   WV 0 1
 291  LOAD Z   10  22  10.81-    04  10.81-  04                GLOB UNIF   WV 0 1
 292  LOAD X   10  22  21.63      1  10.81    1                GLOB UNIF   WV 0 1
 293  LOAD Y   10  22  21.63     50  10.81   53                GLOB UNIF   WV 0 1
 294  LOAD Z   10  22  21.63-    04  10.81-  04                GLOB UNIF   WV 0 1
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3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

```
LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0
                  1    1    2    2    3    3    4    4    5    5    6    6    7    7    8
```

295	LOAD	X	22	34	0.00	1	10.81	1	GLOB	UNIF	WV	0	1
296	LOAD	Y	22	34	0.00	53	10.81	57	GLOB	UNIF	WV	0	1
297	LOAD	Z	22	34	0.00-	04	10.81-	05	GLOB	UNIF	WV	0	1
298	LOAD	X	22	34	10.81	1	10.81	1	GLOB	UNIF	WV	0	1
299	LOAD	Y	22	34	10.81	57	10.81	64	GLOB	UNIF	WV	0	1
300	LOAD	Z	22	34	10.81-	05	10.81-	05	GLOB	UNIF	WV	0	1
301	LOAD	X	22	34	21.63	1	10.81	1	GLOB	UNIF	WV	0	1
302	LOAD	Y	22	34	21.63	64	10.81	71	GLOB	UNIF	WV	0	1
303	LOAD	Z	22	34	21.63-	05	10.81-	06	GLOB	UNIF	WV	0	1
304	LOAD	X	34	40	0.00	1	4.73	1	GLOB	UNIF	WV	0	1
305	LOAD	Y	34	40	0.00	73	4.73	77	GLOB	UNIF	WV	0	1
306	LOAD	Z	34	40	0.00-	05	4.73-	05	GLOB	UNIF	WV	0	1
307	LOAD	X	34	40	4.73	1	4.73	1	GLOB	UNIF	WV	0	1
308	LOAD	Y	34	40	4.73	77	4.73	82	GLOB	UNIF	WV	0	1
309	LOAD	Z	34	40	4.73-	05	4.73-	06	GLOB	UNIF	WV	0	1
310	LOAD	X	34	40	9.45	1	4.73	1	GLOB	UNIF	WV	0	1
311	LOAD	Y	34	40	9.45	82	4.73	88	GLOB	UNIF	WV	0	1
312	LOAD	Z	34	40	9.45-	06	4.73-	06	GLOB	UNIF	WV	0	1
313	LOAD	X	40	49	0.00	1	6.09	1	GLOB	UNIF	WV	0	1
314	LOAD	Y	40	49	0.00	88	6.09	96	GLOB	UNIF	WV	0	1
315	LOAD	Z	40	49	0.00-	08	6.09-	09	GLOB	UNIF	WV	0	1
316	LOAD	X	40	49	6.09	1	6.09	1	GLOB	UNIF	WV	0	1
317	LOAD	Y	40	49	6.09	96	6.09	106	GLOB	UNIF	WV	0	1
318	LOAD	Z	40	49	6.09-	09	6.09-	09	GLOB	UNIF	WV	0	1
319	LOAD	X	40	49	12.17	1	6.09	1	GLOB	UNIF	WV	0	1
320	LOAD	Y	40	49	12.17	106	6.09	118	GLOB	UNIF	WV	0	1
321	LOAD	Z	40	49	12.17-	09	6.09-	11	GLOB	UNIF	WV	0	1
322	LOAD	X	49	55	0.00	1	1.52	1	GLOB	UNIF	WV	0	1
323	LOAD	Y	49	55	0.00	118	1.52	121	GLOB	UNIF	WV	0	1
324	LOAD	Z	49	55	0.00-	10	1.52-	10	GLOB	UNIF	WV	0	1
325	LOAD	X	49	55	1.52	1	1.52	1	GLOB	UNIF	WV	0	1
326	LOAD	Y	49	55	1.52	121	1.52	125	GLOB	UNIF	WV	0	1
327	LOAD	Z	49	55	1.52-	10	1.52-	10	GLOB	UNIF	WV	0	1
328	LOAD	X	49	55	3.04	1	1.52	1	GLOB	UNIF	WV	0	1
329	LOAD	Y	49	55	3.04	125	1.52	128	GLOB	UNIF	WV	0	1
330	LOAD	Z	49	55	3.04-	10	1.52-	11	GLOB	UNIF	WV	0	1
331	LOAD	X	12	24	0.00-	1	10.81-	1	GLOB	UNIF	WV	0	1
332	LOAD	Y	12	24	0.00	47	10.81	48	GLOB	UNIF	WV	0	1
333	LOAD	Z	12	24	0.00-	04	10.81-	04	GLOB	UNIF	WV	0	1
334	LOAD	X	12	24	10.81-	1	10.81-	1	GLOB	UNIF	WV	0	1
335	LOAD	Y	12	24	10.81	48	10.81	50	GLOB	UNIF	WV	0	1
336	LOAD	Z	12	24	10.81-	04	10.81-	04	GLOB	UNIF	WV	0	1
337	LOAD	X	12	24	21.63-	1	10.81-	1	GLOB	UNIF	WV	0	1
338	LOAD	Y	12	24	21.63	50	10.81	53	GLOB	UNIF	WV	0	1
339	LOAD	Z	12	24	21.63-	04	10.81-	04	GLOB	UNIF	WV	0	1
340	LOAD	X	24	36	0.00-	1	10.81-	1	GLOB	UNIF	WV	0	1
341	LOAD	Y	24	36	0.00	53	10.81	57	GLOB	UNIF	WV	0	1
342	LOAD	Z	24	36	0.00-	04	10.81-	05	GLOB	UNIF	WV	0	1
343	LOAD	X	24	36	10.81-	1	10.81-	1	GLOB	UNIF	WV	0	1

3-PILE ACHR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0

LINE NO.												
344	LOAD Y	24	36	10.81	57	10.81	64	GLOB UNIF	WV	0	1
345	LOAD Z	24	36	10.81-	05	10.81-	05	GLOB UNIF	WV	0	1
346	LOAD X	24	36	21.63-	1	10.81-	1	GLOB UNIF	WV	0	1
347	LOAD Y	24	36	21.63	64	10.81	71	GLOB UNIF	WV	0	1
348	LOAD Z	24	36	21.63-	05	10.81-	06	GLOB UNIF	WV	0	1
349	LOAD X	36	41	0.00-	1	4.73-	1	GLOB UNIF	WV	0	1
350	LOAD Y	36	41	0.00	73	4.73	77	GLOB UNIF	WV	0	1
351	LOAD Z	36	41	0.00-	05	4.73-	05	GLOB UNIF	WV	0	1
352	LOAD X	36	41	4.73-	1	4.73-	1	GLOB UNIF	WV	0	1
353	LOAD Y	36	41	4.73	77	4.73	82	GLOB UNIF	WV	0	1
354	LOAD Z	36	41	4.73-	05	4.73-	06	GLOB UNIF	WV	0	1
355	LOAD X	36	41	9.45-	1	4.73-	1	GLOB UNIF	WV	0	1
356	LOAD Y	36	41	9.45	82	4.73	88	GLOB UNIF	WV	0	1
357	LOAD Z	36	41	9.45-	06	4.73-	06	GLOB UNIF	WV	0	1
358	LOAD X	41	51	0.00-	1	6.09-	1	GLOB UNIF	WV	0	1
359	LOAD Y	41	51	0.00	88	6.09	96	GLOB UNIF	WV	0	1
360	LOAD Z	41	51	0.00-	08	6.09-	09	GLOB UNIF	WV	0	1
361	LOAD X	41	51	6.09-	1	6.09-	1	GLOB UNIF	WV	0	1
362	LOAD Y	41	51	6.09	96	6.09	106	GLOB UNIF	WV	0	1
363	LOAD Z	41	51	6.09-	09	6.09-	09	GLOB UNIF	WV	0	1
364	LOAD X	41	51	12.17-	1	6.09-	1	GLOB UNIF	WV	0	1
365	LOAD Y	41	51	12.17	106	6.09	118	GLOB UNIF	WV	0	1
366	LOAD Z	41	51	12.17-	09	6.09-	11	GLOB UNIF	WV	0	1
367	LOAD X	51	56	0.00-	1	1.52-	1	GLOB UNIF	WV	0	1
368	LOAD Y	51	56	0.00	118	1.52	121	GLOB UNIF	WV	0	1
369	LOAD Z	51	56	0.00-	10	1.52-	10	GLOB UNIF	WV	0	1
370	LOAD X	51	56	1.52-	1	1.52-	1	GLOB UNIF	WV	0	1
371	LOAD Y	51	56	1.52	121	1.52	125	GLOB UNIF	WV	0	1
372	LOAD Z	51	56	1.52-	10	1.52-	10	GLOB UNIF	WV	0	1
373	LOAD X	51	56	3.04-	1	1.52-	1	GLOB UNIF	WV	0	1
374	LOAD Y	51	56	3.04	125	1.52	128	GLOB UNIF	WV	0	1
375	LOAD Z	51	56	3.04-	10	1.52-	11	GLOB UNIF	WV	0	1
376	LOAD Y	14	26	0.00	50	10.81	51	GLOB UNIF	WV	0	1
377	LOAD Z	14	26	0.00	08	10.81	08	GLOB UNIF	WV	0	1
378	LOAD Y	14	26	10.81	51	10.81	53	GLOB UNIF	WV	0	1
379	LOAD Z	14	26	10.81	08	10.81	09	GLOB UNIF	WV	0	1
380	LOAD Y	14	26	21.63	53	10.81	56	GLOB UNIF	WV	0	1
381	LOAD Z	14	26	21.63	09	10.81	09	GLOB UNIF	WV	0	1
382	LOAD Y	26	38	0.00	55	10.86	59	GLOB UNIF	WV	0	1
383	LOAD Z	26	38	0.00-	11	10.86-	11	GLOB UNIF	WV	0	1
384	LOAD Y	26	38	10.86	59	10.86	64	GLOB UNIF	WV	0	1
385	LOAD Z	26	38	10.86-	11	10.86-	12	GLOB UNIF	WV	0	1
386	LOAD Y	26	38	21.72	64	10.86	70	GLOB UNIF	WV	0	1
387	LOAD Z	26	38	21.72-	12	10.86-	13	GLOB UNIF	WV	0	1
388	LOAD Y	38	42	0.00	65	5.01	69	GLOB UNIF	WV	0	1
389	LOAD Z	38	42	0.00	25	5.01	27	GLOB UNIF	WV	0	1
390	LOAD Y	38	42	5.01	69	5.01	73	GLOB UNIF	WV	0	1
391	LOAD Z	38	42	5.01	27	5.01	29	GLOB UNIF	WV	0	1
392	LOAD Y	38	42	10.02	73	5.01	78	GLOB UNIF	WV	0	1

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                1    1    2    2    3    3    4    4    5    5    6    6    7    7    8
LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0
```

393	LOAD	Z	38	42	10.02	29	5.01	31	GLOB UNIF	WV	0 1
394	LOAD	Y	42	53	0.00	65	7.09	71	GLOB UNIF	WV	0 1
395	LOAD	Z	42	53	0.00	41	7.09	45	GLOB UNIF	WV	0 1
396	LOAD	Y	42	53	7.09	71	7.09	79	GLOB UNIF	WV	0 1
397	LOAD	Z	42	53	7.09	45	7.09	49	GLOB UNIF	WV	0 1
398	LOAD	Y	42	53	14.17	79	7.09	84	GLOB UNIF	WV	0 1
399	LOAD	Z	42	53	14.17	49	7.09	55	GLOB UNIF	WV	0 1
400	LOAD	Y	53	57	0.00	120	1.52	123	GLOB UNIF	WV	0 1
401	LOAD	Z	53	57	0.00	20	1.52	20	GLOB UNIF	WV	0 1
402	LOAD	Y	53	57	1.52	123	1.52	126	GLOB UNIF	WV	0 1
403	LOAD	Z	53	57	1.52	20	1.52	21	GLOB UNIF	WV	0 1
404	LOAD	Y	53	57	3.04	126	1.52	129	GLOB UNIF	WV	0 1
405	LOAD	Z	53	57	3.04	21	1.52	21	GLOB UNIF	WV	0 1
406	LOAD	Y	10	11	0.00	21	9.67	21	GLOB UNIF	WV	0 1
407	LOAD	Y	10	11	9.67	21	9.67	21	GLOB UNIF	WV	0 1
408	LOAD	Y	10	11	19.35	21	9.67	21	GLOB UNIF	WV	0 1
409	LOAD	Y	11	12	0.00	21	9.67	21	GLOB UNIF	WV	0 1
410	LOAD	Y	11	12	9.67	21	9.67	21	GLOB UNIF	WV	0 1
411	LOAD	Y	11	12	19.35	21	9.67	21	GLOB UNIF	WV	0 1
412	LOAD	X	12	13	0.00-	09	9.67-	09	GLOB UNIF	WV	0 1
413	LOAD	Y	12	13	0.00	05	9.67	05	GLOB UNIF	WV	0 1
414	LOAD	X	12	13	9.67-	09	9.67-	10	GLOB UNIF	WV	0 1
415	LOAD	Y	12	13	9.67	05	9.67	06	GLOB UNIF	WV	0 1
416	LOAD	X	12	13	19.35-	10	9.67-	10	GLOB UNIF	WV	0 1
417	LOAD	Y	12	13	19.35	06	9.67	06	GLOB UNIF	WV	0 1
418	LOAD	X	13	14	0.00-	10	9.67-	10	GLOB UNIF	WV	0 1
419	LOAD	Y	13	14	0.00	06	9.67	06	GLOB UNIF	WV	0 1
420	LOAD	X	13	14	9.67-	10	9.67-	10	GLOB UNIF	WV	0 1
421	LOAD	Y	13	14	9.67	06	9.67	06	GLOB UNIF	WV	0 1
422	LOAD	X	13	14	19.34-	10	9.67-	10	GLOB UNIF	WV	0 1
423	LOAD	Y	13	14	19.34	06	9.67	06	GLOB UNIF	WV	0 1
424	LOAD	X	14	15	0.00	10	9.67	10	GLOB UNIF	WV	0 1
425	LOAD	Y	14	15	0.00	06	9.67	06	GLOB UNIF	WV	0 1
426	LOAD	X	14	15	9.67	10	9.67	10	GLOB UNIF	WV	0 1
427	LOAD	Y	14	15	9.67	06	9.67	06	GLOB UNIF	WV	0 1
428	LOAD	X	14	15	19.34	10	9.67	10	GLOB UNIF	WV	0 1
429	LOAD	Y	14	15	19.34	06	9.67	06	GLOB UNIF	WV	0 1
430	LOAD	X	15	10	0.00	10	9.67	10	GLOB UNIF	WV	0 1
431	LOAD	Y	15	10	0.00	06	9.67	06	GLOB UNIF	WV	0 1
432	LOAD	X	15	10	9.67	10	9.67	09	GLOB UNIF	WV	0 1
433	LOAD	Y	15	10	9.67	06	9.67	05	GLOB UNIF	WV	0 1
434	LOAD	X	15	10	19.33	09	9.67	09	GLOB UNIF	WV	0 1
435	LOAD	Y	15	10	19.33	05	9.67	05	GLOB UNIF	WV	0 1
436	LOAD	X	11	13	0.00	07	9.67	07	GLOB UNIF	WV	0 1
437	LOAD	Y	11	13	0.00	04	9.67	04	GLOB UNIF	WV	0 1
438	LOAD	X	11	13	9.67	07	9.67	08	GLOB UNIF	WV	0 1
439	LOAD	Y	11	13	9.67	04	9.67	04	GLOB UNIF	WV	0 1
440	LOAD	X	11	13	19.33	08	9.67	08	GLOB UNIF	WV	0 1
441	LOAD	Y	11	13	19.33	04	9.67	04	GLOB UNIF	WV	0 1

S T R A P   I N P U T   D A T A

3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0
(column guide above: 1, 1, 2, 2, 3, 3, 4, 4, 5, 5, 6, 6, 7, 7, 8)

442	LOAD Y	13	15	0.00	18	9.67	18	GLOB	UNIF	WV	0	1
443	LOAD Y	13	15	9.67	18	9.67	18	GLOB	UNIF	WV	0	1
444	LOAD Y	13	15	19.33	18	9.67	18	GLOB	UNIF	WV	0	1
445	LOAD X	15	11	0.00-	08	9.67-	08	GLOB	UNIF	WV	0	1
446	LOAD Y	15	11	0.00	04	9.67	04	GLOB	UNIF	WV	0	1
447	LOAD X	15	11	9.67-	04	9.67-	07	GLOB	UNIF	WV	0	1
448	LOAD Y	15	11	9.67	04	9.67	04	GLOB	UNIF	WV	0	1
449	LOAD X	15	11	19.33-	07	9.67-	07	GLOB	UNIF	WV	0	1
450	LOAD Y	15	11	19.33	04	9.67	04	GLOB	UNIF	WV	0	1
451	LOAD Y	22	23	0.00	24	8.13	24	GLOB	UNIF	WV	0	1
452	LOAD Y	22	23	8.13	24	8.13	24	GLOB	UNIF	WV	0	1
453	LOAD Y	22	23	16.25	24	8.13	24	GLOB	UNIF	WV	0	1
454	LOAD Y	23	24	0.00	24	8.13	24	GLOB	UNIF	WV	0	1
455	LOAD Y	23	24	8.13	24	8.13	24	GLOB	UNIF	WV	0	1
456	LOAD Y	23	24	16.25	24	8.13	24	GLOB	UNIF	WV	0	1
457	LOAD X	24	25	0.00-	10	8.13-	11	GLOB	UNIF	WV	0	1
458	LOAD Y	24	25	0.00	06	8.13	06	GLOB	UNIF	WV	0	1
459	LOAD X	24	25	8.13-	11	8.13-	11	GLOB	UNIF	WV	0	1
460	LOAD Y	24	25	8.13	06	8.13	06	GLOB	UNIF	WV	0	1
461	LOAD X	24	25	16.25-	11	8.13-	11	GLOB	UNIF	WV	0	1
462	LOAD Y	24	25	16.25	06	8.13	06	GLOB	UNIF	WV	0	1
463	LOAD X	25	26	0.00-	11	8.13-	11	GLOB	UNIF	WV	0	1
464	LOAD Y	25	26	0.00	06	8.13	06	GLOB	UNIF	WV	0	1
465	LOAD X	25	26	8.13-	11	8.13-	11	GLOB	UNIF	WV	0	1
466	LOAD Y	25	26	8.13	06	8.13	06	GLOB	UNIF	WV	0	1
467	LOAD X	25	26	16.25-	11	8.13-	11	GLOB	UNIF	WV	0	1
468	LOAD Y	25	26	16.25	06	8.13	06	GLOB	UNIF	WV	0	1
469	LOAD X	26	27	0.00	11	8.13	11	GLOB	UNIF	WV	0	1
470	LOAD Y	26	27	0.00	06	8.13	06	GLOB	UNIF	WV	0	1
471	LOAD X	26	27	8.13	11	8.13	11	GLOB	UNIF	WV	0	1
472	LOAD Y	26	27	8.13	06	8.13	06	GLOB	UNIF	WV	0	1
473	LOAD X	26	27	16.25	11	8.13	11	GLOB	UNIF	WV	0	1
474	LOAD Y	26	27	16.25	06	8.13	06	GLOB	UNIF	WV	0	1
475	LOAD X	27	22	0.00	11	8.13	11	GLOB	UNIF	WV	0	1
476	LOAD Y	27	22	0.00	06	8.13	06	GLOB	UNIF	WV	0	1
477	LOAD X	27	22	8.13	11	8.13	11	GLOB	UNIF	WV	0	1
478	LOAD Y	27	22	8.13	06	8.13	06	GLOB	UNIF	WV	0	1
479	LOAD X	27	22	16.25	11	8.13	11	GLOB	UNIF	WV	0	1
480	LOAD Y	27	22	16.25	06	8.13	06	GLOB	UNIF	WV	0	1
481	LOAD X	23	25	0.00	08	8.13	08	GLOB	UNIF	WV	0	1
482	LOAD Y	23	25	0.00	05	8.13	05	GLOB	UNIF	WV	0	1
483	LOAD X	23	25	8.13	08	8.13	09	GLOB	UNIF	WV	0	1
484	LOAD Y	23	25	8.13	05	8.13	05	GLOB	UNIF	WV	0	1
485	LOAD X	23	25	16.25	09	8.13	09	GLOB	UNIF	WV	0	1
486	LOAD Y	23	25	16.25	05	8.13	05	GLOB	UNIF	WV	0	1
487	LOAD Y	25	27	0.00	20	8.13	20	GLOB	UNIF	WV	0	1
488	LOAD Y	25	27	8.13	20	8.13	20	GLOB	UNIF	WV	0	1
489	LOAD Y	25	27	16.25	20	8.13	20	GLOB	UNIF	WV	0	1
490	LOAD X	27	23	0.00-	09	8.13-	09	GLOB	UNIF	WV	0	1

3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHEW

LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0

LINE NO.										
491	LOAD Y	27	23	0.00	05	8.13	05	GLOB UNIF	WV 0 1
492	LOAD X	27	23	8.13-	09	8.13-	08	GLOB UNIF	WV 0 1
493	LOAD Y	27	23	8.13	05	8.13	05	GLOB UNIF	WV 0 1
494	LOAD X	27	23	16.25-	08	8.13-	08	GLOB UNIF	WV 0 1
495	LOAD Y	27	23	16.25	05	8.13	05	GLOB UNIF	WV 0 1
496	LOAD Y	34	35	0.00	23	6.59	23	GLOB UNIF	WV 0 1
497	LOAD Y	34	35	6.59	23	6.59	23	GLOB UNIF	WV 0 1
498	LOAD Y	34	35	13.18	23	6.59	23	GLOB UNIF	WV 0 1
499	LOAD Y	35	36	0.00	23	6.59	23	GLOB UNIF	WV 0 1
500	LOAD Y	35	36	6.59	23	6.59	23	GLOB UNIF	WV 0 1
501	LOAD Y	35	36	13.18	23	6.59	23	GLOB UNIF	WV 0 1
502	LOAD X	36	37	0.00-	10	6.59-	10	GLOB UNIF	WV 0 1
503	LOAD Y	36	37	0.00	06	6.59	06	GLOB UNIF	WV 0 1
504	LOAD X	36	37	6.59-	10	6.59-	10	GLOB UNIF	WV 0 1
505	LOAD Y	36	37	6.59	06	6.59	06	GLOB UNIF	WV 0 1
506	LOAD X	36	37	13.18-	10	6.59-	10	GLOB UNIF	WV 0 1
507	LOAD Y	36	37	13.18	06	6.59	06	GLOB UNIF	WV 0 1
508	LOAD X	37	38	0.00-	07	10.07-	07	GLOB UNIF	WV 0 1
509	LOAD Y	37	38	0.00	03	10.07	03	GLOB UNIF	WV 0 1
510	LOAD X	37	38	10.07-	07	10.07-	07	GLOB UNIF	WV 0 1
511	LOAD Y	37	38	10.07	03	10.07	03	GLOB UNIF	WV 0 1
512	LOAD X	37	38	20.15-	07	10.07-	07	GLOB UNIF	WV 0 1
513	LOAD Y	37	38	20.15	03	10.07	02	GLOB UNIF	WV 0 1
514	LOAD X	38	39	0.00	07	10.07	07	GLOB UNIF	WV 0 1
515	LOAD Y	38	39	0.00	02	10.07	03	GLOB UNIF	WV 0 1
516	LOAD X	38	39	10.07	07	10.07	07	GLOB UNIF	WV 0 1
517	LOAD Y	38	39	10.07	03	10.07	03	GLOB UNIF	WV 0 1
518	LOAD X	38	39	20.15	07	10.07	07	GLOB UNIF	WV 0 1
519	LOAD Y	38	39	20.15	03	10.07	03	GLOB UNIF	WV 0 1
520	LOAD X	39	34	0.00	10	6.59	10	GLOB UNIF	WV 0 1
521	LOAD Y	39	34	0.00	06	6.59	06	GLOB UNIF	WV 0 1
522	LOAD X	39	34	6.59	10	6.59	10	GLOB UNIF	WV 0 1
523	LOAD Y	39	34	6.59	06	6.59	06	GLOB UNIF	WV 0 1
524	LOAD X	39	34	13.18	10	6.59	10	GLOB UNIF	WV 0 1
525	LOAD Y	39	34	13.18	06	6.59	06	GLOB UNIF	WV 0 1
526	LOAD X	35	37	0.00	10	6.59	10	GLOB UNIF	WV 0 1
527	LOAD Y	35	37	0.00	06	6.59	06	GLOB UNIF	WV 0 1
528	LOAD X	35	37	6.59	10	6.59	10	GLOB UNIF	WV 0 1
529	LOAD Y	35	37	6.59	06	6.59	06	GLOB UNIF	WV 0 1
530	LOAD X	35	37	13.18	10	6.59	10	GLOB UNIF	WV 0 1
531	LOAD Y	35	37	13.18	06	6.59	06	GLOB UNIF	WV 0 1
532	LOAD Y	37	39	0.00	24	6.59	24	GLOB UNIF	WV 0 1
533	LOAD Y	37	39	6.59	24	6.59	24	GLOB UNIF	WV 0 1
534	LOAD Y	37	39	13.17	24	6.59	24	GLOB UNIF	WV 0 1
535	LOAD X	39	35	0.00-	10	6.59-	10	GLOB UNIF	WV 0 1
536	LOAD Y	39	35	0.00	06	6.59	06	GLOB UNIF	WV 0 1
537	LOAD X	39	35	6.59-	10	6.59-	10	GLOB UNIF	WV 0 1
538	LOAD Y	39	35	6.59	06	6.59	06	GLOB UNIF	WV 0 1
539	LOAD X	39	35	13.18-	10	6.59-	10	GLOB UNIF	WV 0 1

S T R A P   I N P U T   D A T A

3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0

540	LOAD Y	39	35	13.18	06	6.59	06	GLOB UNIF	WV 0 1
541	LOAD Y	49	50	0.00	46	5.05	46	GLOB UNIF	WV 0 1
542	LOAD Y	49	50	5.05	46	5.05	46	GLOB UNIF	WV 0 1
543	LOAD Y	49	50	10.10	46	5.05	46	GLOB UNIF	WV 0 1
544	LOAD Y	50	51	0.00	46	5.05	46	GLOB UNIF	WV 0 1
545	LOAD Y	50	51	5.05	46	5.05	46	GLOB UNIF	WV 0 1
546	LOAD Y	50	51	10.10	46	5.05	46	GLOB UNIF	WV 0 1
547	LOAD X	51	52	0.00-	20	5.05-	20	GLOB UNIF	WV 0 1
548	LOAD Y	51	52	0.00	12	5.05	12	GLOB UNIF	WV 0 1
549	LOAD X	51	52	5.05-	20	5.05-	21	GLOB UNIF	WV 0 1
550	LOAD Y	51	52	5.05	12	5.05	12	GLOB UNIF	WV 0 1
551	LOAD X	51	52	10.10-	21	5.05-	21	GLOB UNIF	WV 0 1
552	LOAD Y	51	52	10.10	12	5.05	12	GLOB UNIF	WV 0 1
553	LOAD X	52	53	0.00-	21	5.05-	21	GLOB UNIF	WV 0 1
554	LOAD Y	52	53	0.00	12	5.05	12	GLOB UNIF	WV 0 1
555	LOAD X	52	53	5.05-	21	5.05-	21	GLOB UNIF	WV 0 1
556	LOAD Y	52	53	5.05	12	5.05	12	GLOB UNIF	WV 0 1
557	LOAD X	52	53	10.10-	21	5.05-	21	GLOB UNIF	WV 0 1
558	LOAD Y	52	53	10.10	12	5.05	12	GLOB UNIF	WV 0 1
559	LOAD X	53	54	0.00	21	5.05	21	GLOB UNIF	WV 0 1
560	LOAD Y	53	54	0.00	12	5.05	12	GLOB UNIF	WV 0 1
561	LOAD X	53	54	5.05	21	5.05	21	GLOB UNIF	WV 0 1
562	LOAD Y	53	54	5.05	12	5.05	12	GLOB UNIF	WV 0 1
563	LOAD X	53	54	10.10	21	5.05	21	GLOB UNIF	WV 0 1
564	LOAD Y	53	54	10.10	12	5.05	12	GLOB UNIF	WV 0 1
565	LOAD X	54	49	0.00	21	5.05	21	GLOB UNIF	WV 0 1
566	LOAD Y	54	49	0.00	12	5.05	12	GLOB UNIF	WV 0 1
567	LOAD X	54	49	5.05	21	5.05	20	GLOB UNIF	WV 0 1
568	LOAD Y	54	49	5.05	12	5.05	12	GLOB UNIF	WV 0 1
569	LOAD X	54	49	10.10	20	5.05	20	GLOB UNIF	WV 0 1
570	LOAD Y	54	49	10.10	12	5.05	12	GLOB UNIF	WV 0 1
571	LOAD X	50	52	0.00	16	5.05	16	GLOB UNIF	WV 0 1
572	LOAD Y	50	52	0.00	09	5.05	09	GLOB UNIF	WV 0 1
573	LOAD X	50	52	5.05	16	5.05	17	GLOB UNIF	WV 0 1
574	LOAD Y	50	52	5.05	09	5.05	10	GLOB UNIF	WV 0 1
575	LOAD X	50	52	10.10	17	5.05	17	GLOB UNIF	WV 0 1
576	LOAD Y	50	52	10.10	10	5.05	10	GLOB UNIF	WV 0 1
577	LOAD Y	52	54	0.00	39	5.05	39	GLOB UNIF	WV 0 1
578	LOAD Y	52	54	5.05	39	5.05	39	GLOB UNIF	WV 0 1
579	LOAD Y	52	54	10.09	39	5.05	39	GLOB UNIF	WV 0 1
580	LOAD X	54	50	0.00-	17	5.05-	17	GLOB UNIF	WV 0 1
581	LOAD Y	54	50	0.00	10	5.05	10	GLOB UNIF	WV 0 1
582	LOAD X	54	50	5.05-	17	5.05-	16	GLOB UNIF	WV 0 1
583	LOAD Y	54	50	5.05	10	5.05	09	GLOB UNIF	WV 0 1
584	LOAD X	54	50	10.10-	16	5.05-	16	GLOB UNIF	WV 0 1
585	LOAD Y	54	50	10.10	09	5.05	09	GLOB UNIF	WV 0 1
586	LOAD X	11	22	0.00-	1	13.44-	1	GLOB UNIF	WV 0 1
587	LOAD Y	11	22	0.00	19	13.44	19	GLOB UNIF	WV 0 1
588	LOAD Z	11	22	0.00-	1	13.44-	1	GLOB UNIF	WV 0 1

STRAP INPUT DATA

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DATE 04/27/76

3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

```
LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0
```

589	LOAD	X	11	22	13.44-	1	13.44-	1	GLOB	UNIF	WV	0	1
590	LOAD	Y	11	22	13.44	19	13.44	20	GLOB	UNIF	WV	0	1
591	LOAD	Z	11	22	13.44-	1	13.44-	1	GLOB	UNIF	WV	0	1
592	LOAD	X	11	22	26.88-	1	13.44-	1	GLOB	UNIF	WV	0	1
593	LOAD	Y	11	22	26.88	20	13.44	21	GLOB	UNIF	WV	0	1
594	LOAD	Z	11	22	26.88-	1	13.44-	1	GLOB	UNIF	WV	0	1
595	LOAD	X	11	24	0.00	1	13.44	1	GLOB	UNIF	WV	0	1
596	LOAD	Y	11	24	0.00	19	13.44	19	GLOB	UNIF	WV	0	1
597	LOAD	Z	11	24	0.00-	1	13.44-	1	GLOB	UNIF	WV	0	1
598	LOAD	X	11	24	13.44	1	13.44	1	GLOB	UNIF	WV	0	1
599	LOAD	Y	11	24	13.44	19	13.44	20	GLOB	UNIF	WV	0	1
600	LOAD	Z	11	24	13.44-	1	13.44-	1	GLOB	UNIF	WV	0	1
601	LOAD	X	11	24	26.88	1	13.44	1	GLOB	UNIF	WV	0	1
602	LOAD	Y	11	24	26.88	20	13.44	21	GLOB	UNIF	WV	0	1
603	LOAD	Z	11	24	26.88-	1	13.44-	1	GLOB	UNIF	WV	0	1
604	LOAD	X	13	24	0.00-	03	13.44-	03	GLOB	UNIF	WV	0	1
605	LOAD	Y	13	24	0.00	14	13.44	14	GLOB	UNIF	WV	0	1
606	LOAD	Z	13	24	0.00	09	13.44	09	GLOB	UNIF	WV	0	1
607	LOAD	X	13	24	13.44-	03	13.44-	03	GLOB	UNIF	WV	0	1
608	LOAD	Y	13	24	13.44	14	13.44	14	GLOB	UNIF	WV	0	1
609	LOAD	Z	13	24	13.44	09	13.44	09	GLOB	UNIF	WV	0	1
610	LOAD	X	13	24	26.88-	03	13.44-	03	GLOB	UNIF	WV	0	1
611	LOAD	Y	13	24	26.88	14	13.44	15	GLOB	UNIF	WV	0	1
612	LOAD	Z	13	24	26.88	09	13.44	09	GLOB	UNIF	WV	0	1
613	LOAD	X	13	26	0.00-	04	13.44-	04	GLOB	UNIF	WV	0	1
614	LOAD	Y	13	26	0.00	16	13.44	16	GLOB	UNIF	WV	0	1
615	LOAD	Z	13	26	0.00-	08	13.44-	08	GLOB	UNIF	WV	0	1
616	LOAD	X	13	26	13.44-	04	13.44-	04	GLOB	UNIF	WV	0	1
617	LOAD	Y	13	26	13.44	16	13.44	17	GLOB	UNIF	WV	0	1
618	LOAD	Z	13	26	13.44-	08	13.44-	08	GLOB	UNIF	WV	0	1
619	LOAD	X	13	26	26.88-	04	13.44-	04	GLOB	UNIF	WV	0	1
620	LOAD	Y	13	26	26.88	17	13.44	17	GLOB	UNIF	WV	0	1
621	LOAD	Z	13	26	26.88-	08	13.44-	09	GLOB	UNIF	WV	0	1
622	LOAD	X	15	26	0.00	04	13.44	04	GLOB	UNIF	WV	0	1
623	LOAD	Y	15	26	0.00	16	13.44	16	GLOB	UNIF	WV	0	1
624	LOAD	Z	15	26	0.00-	08	13.44-	08	GLOB	UNIF	WV	0	1
625	LOAD	X	15	26	13.44	04	13.44	04	GLOB	UNIF	WV	0	1
626	LOAD	Y	15	26	13.44	16	13.44	17	GLOB	UNIF	WV	0	1
627	LOAD	Z	15	26	13.44-	08	13.44-	08	GLOB	UNIF	WV	0	1
628	LOAD	X	15	26	26.88	04	13.44	04	GLOB	UNIF	WV	0	1
629	LOAD	Y	15	26	26.88	17	13.44	17	GLOB	UNIF	WV	0	1
630	LOAD	Z	15	26	26.88-	08	13.44-	09	GLOB	UNIF	WV	0	1
631	LOAD	X	15	22	0.00	03	13.44	03	GLOB	UNIF	WV	0	1
632	LOAD	Y	15	22	0.00	14	13.44	14	GLOB	UNIF	WV	0	1
633	LOAD	Z	15	22	0.00	09	13.44	09	GLOB	UNIF	WV	0	1
634	LOAD	X	15	22	13.44	03	13.44	03	GLOB	UNIF	WV	0	1
635	LOAD	Y	15	22	13.44	14	13.44	14	GLOB	UNIF	WV	0	1
636	LOAD	Z	15	22	13.44	09	13.44	09	GLOB	UNIF	WV	0	1
637	LOAD	X	15	22	26.88	03	13.44	03	GLOB	UNIF	WV	0	1

S T R A   I N P U T   D A T A

3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0

638	LOAD	Y	15	22	26.88	14	13.44	15	GLOB	UNIF	WV	0	1
639	LOAD	Z	15	22	26.88	09	13.44	09	GLOB	UNIF	WV	0	1
640	LOAD	X	22	36	0.00	1	18.20	1	GLOB	UNIF	WV	0	1
641	LOAD	Y	22	36	0.00	27	18.20	29	GLOB	UNIF	WV	0	1
642	LOAD	Z	22	36	0.00-	1	18.20-	1	GLOB	UNIF	WV	0	1
643	LOAD	X	22	36	18.20	1	18.20	1	GLOB	UNIF	WV	0	1
644	LOAD	Y	22	36	18.20	29	18.20	32	GLOB	UNIF	WV	0	1
645	LOAD	Z	22	36	18.20-	1	18.20-	1	GLOB	UNIF	WV	0	1
646	LOAD	X	22	36	36.39	1	18.20	1	GLOB	UNIF	WV	0	1
647	LOAD	Y	22	36	36.39	32	18.20	36	GLOB	UNIF	WV	0	1
648	LOAD	Z	22	36	36.39-	1	18.20-	1	GLOB	UNIF	WV	0	1
649	LOAD	X	24	38	0.00-	08	20.96-	09	GLOB	UNIF	WV	0	1
650	LOAD	Y	24	38	0.00	11	20.96	13	GLOB	UNIF	WV	0	1
651	LOAD	Z	24	38	0.00-	10	20.96-	12	GLOB	UNIF	WV	0	1
652	LOAD	X	24	38	20.96-	09	20.96-	10	GLOB	UNIF	WV	0	1
653	LOAD	Y	24	38	20.96	13	20.96	14	GLOB	UNIF	WV	0	1
654	LOAD	Z	24	38	20.96-	12	20.96-	13	GLOB	UNIF	WV	0	1
655	LOAD	X	24	38	41.93-	10	20.96-	11	GLOB	UNIF	WV	0	1
656	LOAD	Y	24	38	41.93	14	20.96	15	GLOB	UNIF	WV	0	1
657	LOAD	Z	24	38	41.93-	13	20.96-	14	GLOB	UNIF	WV	0	1
658	LOAD	X	26	34	0.00	08	18.20	08	GLOB	UNIF	WV	0	1
659	LOAD	Y	26	34	0.00	14	18.20	15	GLOB	UNIF	WV	0	1
660	LOAD	Z	26	34	0.00	12	18.20	13	GLOB	UNIF	WV	0	1
661	LOAD	X	26	34	18.20	08	18.20	09	GLOB	UNIF	WV	0	1
662	LOAD	Y	26	34	18.20	15	18.20	16	GLOB	UNIF	WV	0	1
663	LOAD	Z	26	34	18.20	13	18.20	14	GLOB	UNIF	WV	0	1
664	LOAD	X	26	34	36.39	09	18.20	09	GLOB	UNIF	WV	0	1
665	LOAD	Y	26	34	36.39	16	18.20	17	GLOB	UNIF	WV	0	1
666	LOAD	Z	26	34	36.39	14	18.20	15	GLOB	UNIF	WV	0	1
667	LOAD	X	36	49	0.00-	1	11.86-	02	GLOB	UNIF	WV	0	1
668	LOAD	Y	36	49	0.00	36	11.86	40	GLOB	UNIF	WV	0	1
669	LOAD	Z	36	49	0.00-	1	11.86-	1	GLOB	UNIF	WV	0	1
670	LOAD	X	36	49	11.86-	02	11.86-	02	GLOB	UNIF	WV	0	1
671	LOAD	Y	36	49	11.86	40	11.86	44	GLOB	UNIF	WV	0	1
672	LOAD	Z	36	49	11.86-	1	11.86-	02	GLOB	UNIF	WV	0	1
673	LOAD	X	36	49	23.72-	02	11.86-	02	GLOB	UNIF	WV	0	1
674	LOAD	Y	36	49	23.72	44	11.86	50	GLOB	UNIF	WV	0	1
675	LOAD	Z	36	49	23.72-	02	11.86-	02	GLOB	UNIF	WV	0	1
676	LOAD	X	36	49	35.58-	02	11.86-	02	GLOB	UNIF	WV	0	1
677	LOAD	Y	36	49	35.58	50	11.86	58	GLOB	UNIF	WV	0	1
678	LOAD	Z	36	49	35.58-	02	11.86-	02	GLOB	UNIF	WV	0	1
679	LOAD	X	38	51	0.00-	08	13.93-	09	GLOB	UNIF	WV	0	1
680	LOAD	Y	38	51	0.00	15	13.93	17	GLOB	UNIF	WV	0	1
681	LOAD	Z	38	51	0.00	16	13.93	18	GLOB	UNIF	WV	0	1
682	LOAD	X	38	51	13.93-	09	13.93-	10	GLOB	UNIF	WV	0	1
683	LOAD	Y	38	51	13.93	17	13.93	19	GLOB	UNIF	WV	0	1
684	LOAD	Z	38	51	13.93	18	13.93	21	GLOB	UNIF	WV	0	1
685	LOAD	X	38	51	27.86-	10	13.93-	11	GLOB	UNIF	WV	0	1
686	LOAD	Y	38	51	27.86	19	13.93	21	GLOB	UNIF	WV	0	1

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3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0

LINE NO.											
687	LOAD Z	38	51	27.86	21	13.93	23	GLOB UNIF	WV	0	1
688	LOAD X	38	51	41.79-	11	13.93-	12	GLOB UNIF	WV	0	1
689	LOAD Y	38	51	41.79	21	13.93	23	GLOB UNIF	WV	0	1
690	LOAD Z	38	51	41.79	23	13.93	26	GLOB UNIF	WV	0	1
691	LOAD X	34	53	0.00	09	9.49	10	GLOB UNIF	WV	0	1
692	LOAD Y	34	53	0.00	23	9.49	25	GLOB UNIF	WV	0	1
693	LOAD Z	34	53	0.00-	15	9.49-	16	GLOB UNIF	WV	0	1
694	LOAD X	34	53	9.49	10	9.49	11	GLOB UNIF	WV	0	1
695	LOAD Y	34	53	9.49	25	9.49	28	GLOB UNIF	WV	0	1
696	LOAD Z	34	53	9.49-	16	9.49-	18	GLOB UNIF	WV	0	1
697	LOAD X	34	53	18.97	11	9.49	13	GLOB UNIF	WV	0	1
698	LOAD Y	34	53	18.97	28	9.49	31	GLOB UNIF	WV	0	1
699	LOAD Z	34	53	18.97-	18	9.49-	20	GLOB UNIF	WV	0	1
700	LOAD X	34	53	28.46	13	9.49	14	GLOB UNIF	WV	0	1
701	LOAD Y	34	53	28.46	31	9.49	34	GLOB UNIF	WV	0	1
702	LOAD Z	34	53	28.46-	20	9.49-	22	GLOB UNIF	WV	0	1
703	LOAD X	34	53	37.95	14	9.49	15	GLOB UNIF	WV	0	1
704	LOAD Y	34	53	37.95	34	9.49	38	GLOB UNIF	WV	0	1
705	LOAD Z	34	53	37.95-	22	9.49-	25	GLOB UNIF	WV	0	1
706	LOAD Y	55	58	0.00	113	5.70	126	GLOB UNIF	WV	0	1
707	LOAD Y	55	58	5.70	126	5.70	141	GLOB UNIF	WV	0	1
708	LOAD Y	55	58	11.40	141	5.70	158	GLOB UNIF	WV	0	1
709	LOAD Y	55	58	17.10	158	5.70	178	GLOB UNIF	WV	0	1
710	LOAD Y	55	58	22.80	178	5.70	202	GLOB UNIF	WV	0	1
711	LOAD Y	58	61	0.00	202	4.19	221	GLOB UNIF	WV	0	1
712	LOAD Y	58	61	4.19	221	4.19	244	GLOB UNIF	WV	0	1
713	LOAD Y	58	61	8.39	244	4.19	270	GLOB UNIF	WV	0	1
714	LOAD Y	56	59	0.00	113	5.70	126	GLOB UNIF	WV	0	1
715	LOAD Y	56	59	5.70	126	5.70	141	GLOB UNIF	WV	0	1
716	LOAD Y	56	59	11.40	141	5.70	158	GLOB UNIF	WV	0	1
717	LOAD Y	56	59	17.10	158	5.70	178	GLOB UNIF	WV	0	1
718	LOAD Y	56	59	22.80	178	5.70	202	GLOB UNIF	WV	0	1
719	LOAD Y	59	64	0.00	202	4.19	221	GLOB UNIF	WV	0	1
720	LOAD Y	59	64	4.19	221	4.19	244	GLOB UNIF	WV	0	1
721	LOAD Y	59	64	8.39	244	4.19	270	GLOB UNIF	WV	0	1
722	LOAD Y	57	60	0.00	116	5.70	129	GLOB UNIF	WV	0	1
723	LOAD Y	57	60	5.70	129	5.70	143	GLOB UNIF	WV	0	1
724	LOAD Y	57	60	11.40	143	5.70	160	GLOB UNIF	WV	0	1
725	LOAD Y	57	60	17.10	160	5.70	180	GLOB UNIF	WV	0	1
726	LOAD Y	57	60	22.80	180	5.70	201	GLOB UNIF	WV	0	1
727	LOAD Y	60	70	0.00	201	2.00	210	GLOB UNIF	WV	0	1
728	LOAD Y	60	70	2.00	210	2.00	220	GLOB UNIF	WV	0	1
729	LOAD Y	60	70	4.00	220	2.00	231	GLOB UNIF	WV	0	1
730	LOAD Y	70	67	0.00	231	.22	232	GLOB UNIF	WV	0	1
731	LOAD Y	70	67	.22	232	.22	233	GLOB UNIF	WV	0	1
732	LOAD Y	70	67	.44	233	.22	234	GLOB UNIF	WV	0	1
733	LOAD Y	70	67	.67	234	.22	235	GLOB UNIF	WV	0	1
734	LOAD Y	70	67	.89	235	.22	237	GLOB UNIF	WV	0	1
735	LOAD Y	70	67	1.11	237	.22	238	GLOB UNIF	WV	0	1

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736	LOAD Y	70	67	1.33	238	.22	239		GLOB UNIF	WV 0 1
737	LOAD Y	70	67	1.56	239	.22	241		GLOB UNIF	WV 0 1
738	LOAD Y	70	67	1.78	241	.22			GLOB UNIF	WV 0 1
739	LOAD Y	58	59	0.00	71	9.67	71		GLOB UNIF	WV 0 1
740	LOAD Y	58	59	9.67	71	9.67	71		GLOB UNIF	WV 0 1
741	LOAD Y	58	59	19.33	71	9.67	71		GLOB UNIF	WV 0 1
742	LOAD X	59	60	0.00-	31	9.67-	32		GLOB UNIF	WV 0 1
743	LOAD Y	59	60	0.00	18	9.67	18		GLOB UNIF	WV 0 1
744	LOAD X	59	60	9.67-	32	9.67-	32		GLOB UNIF	WV 0 1
745	LOAD Y	59	60	9.67	18	9.67	18		GLOB UNIF	WV 0 1
746	LOAD X	59	60	19.33-	32	9.67-	31		GLOB UNIF	WV 0 1
747	LOAD Y	59	60	19.33	18	9.67	18		GLOB UNIF	WV 0 1
748	LOAD X	60	58	0.00	31	9.67	32		GLOB UNIF	WV 0 1
749	LOAD Y	60	58	0.00	18	9.67	18		GLOB UNIF	WV 0 1
750	LOAD X	60	58	9.67	32	9.67	32		GLOB UNIF	WV 0 1
751	LOAD Y	60	58	9.67	18	9.67	18		GLOB UNIF	WV 0 1
752	LOAD X	60	58	19.33	32	9.67	31		GLOB UNIF	WV 0 1
753	LOAD Y	60	58	19.33	18	9.67	18		GLOB UNIF	WV 0 1
754	LOAD Y	59	61	0.00	71	9.13	78		GLOB UNIF	WV 0 1
755	LOAD Y	59	61	9.13	78	9.13	86		GLOB UNIF	WV 0 1
756	LOAD Y	59	61	18.25	86	9.13	95		GLOB UNIF	WV 0 1
757	LOAD X	60	64	0.00-	24	8.41-	27		GLOB UNIF	WV 0 1
758	LOAD Y	60	64	0.00	29	8.41	33		GLOB UNIF	WV 0 1
759	LOAD Z	60	64	0.00	25	8.41	28		GLOB UNIF	WV 0 1
760	LOAD X	60	64	8.41-	27	8.41-	30		GLOB UNIF	WV 0 1
761	LOAD Y	60	64	8.41	33	8.41	36		GLOB UNIF	WV 0 1
762	LOAD Z	60	64	8.41	28	8.41	31		GLOB UNIF	WV 0 1
763	LOAD X	60	64	16.81-	30	8.41-	35		GLOB UNIF	WV 0 1
764	LOAD Y	60	64	16.81	36	8.41	39		GLOB UNIF	WV 0 1
765	LOAD Z	60	64	16.81	31	8.41	34		GLOB UNIF	WV 0 1
766	LOAD X	58	67	0.00	24	7.07	27		GLOB UNIF	WV 0 1
767	LOAD Y	58	67	0.00	29	7.07	32		GLOB UNIF	WV 0 1
768	LOAD Z	58	67	0.00-	25	7.07-	28		GLOB UNIF	WV 0 1
769	LOAD X	58	67	7.07	27	7.07	29		GLOB UNIF	WV 0 1
770	LOAD Y	58	67	7.07	32	7.07	35		GLOB UNIF	WV 0 1
771	LOAD Z	58	67	7.07-	28	7.07-	30		GLOB UNIF	WV 0 1
772	LOAD X	58	67	14.14	29	7.07	31		GLOB UNIF	WV 0 1
773	LOAD Y	58	67	14.14	35	7.07	37		GLOB UNIF	WV 0 1
774	LOAD Z	58	67	14.14-	30	7.07-	32		GLOB UNIF	WV 0 1
775	LOAD Y	70	66	0.00	42	.33	43		GLOB UNIF	WV 0 1
776	LOAD Y	70	66	.33	43	.33	43		GLOB UNIF	WV 0 1
777	LOAD Y	70	66	.66	43	.33	43		GLOB UNIF	WV 0 1
778	LOAD Y	70	66	1.00	43	.33	43		GLOB UNIF	WV 0 1
779	LOAD Y	70	66	1.33	43	.33	43		GLOB UNIF	WV 0 1
780	LOAD Y	70	66	1.66	43	.33	44		GLOB UNIF	WV 0 1
781	LOAD Y	70	66	1.99	44	.33	44		GLOB UNIF	WV 0 1
782	LOAD Y	70	66	2.33	44	.33	44		GLOB UNIF	WV 0 1
783	LOAD Y	70	66	2.66	44	.33			GLOB UNIF	WV 0 1
784	LOAD Y	70	68	0.00	42	.33	43		GLOB UNIF	WV 0 1

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785	LOAD	Y	70	68	.33	43	.33	43			GLOB	UNIF	WV	0	1
786	LOAD	Y	70	68	.66	43	.33	43			GLOB	UNIF	WV	0	1
787	LOAD	Y	70	68	1.00	43	.33	43			GLOB	UNIF	WV	0	1
788	LOAD	Y	70	68	1.33	43	.33	43			GLOB	UNIF	WV	0	1
789	LOAD	Y	70	68	1.66	43	.33	44			GLOB	UNIF	WV	0	1
790	LOAD	Y	70	68	1.99	44	.33	44			GLOB	UNIF	WV	0	1
791	LOAD	Y	70	68	2.33	44	.33	44			GLOB	UNIF	WV	0	1
792	LOAD	Y	70	68	2.66	44	.33				GLOB	UNIF	WV	0	1
793	LOADCN		2												
794	LOAD	Y	43	55	4.08-	345					GLOB	CONC	WN	1	2
795	LOAD	X	43	55					4.08	244106	GLOB	MOMT	WN	1	2
796	LOAD	Y	44	56	4.08-	345					GLOB	CONC	WN	1	2
797	LOAD	X	44	56					4.08	244106	GLOB	MOMT	WN	1	2
798	LOAD	Y	45	57	4.07-	345					GLOB	CONC	WN	1	2
799	LOAD	X	45	57					4.07	244106	GLOB	MOMT	WN	1	2
800	LOAD	Y	43	55	4.08-	1111					GLOB	CONC	WN	2	2
801	LOAD	X	43	55					4.08	653247	GLOB	MOMT	WN	2	2
802	LOAD	Y	44	56	4.06-	1111					GLOB	CONC	WN	2	2
803	LOAD	X	44	56					4.08	653247	GLOB	MOMT	WN	2	2
804	LOAD	Y	45	57	4.07-	1111					GLOB	CONC	WN	2	2
805	LOAD	X	45	57					4.07	653247	GLOB	MOMT	WN	2	2
806	LOAD	X	10	22	0.00-	1	10.81-	1			GLOB	UNIF	WV	0	2
807	LOAD	Y	10	22	0.00-	51	10.81-	52			GLOB	UNIF	WV	0	2
808	LOAD	Z	10	22	0.00	04	10.81	04			GLOB	UNIF	WV	0	2
809	LOAD	X	10	22	10.81-	1	10.81-	1			GLOB	UNIF	WV	0	2
810	LOAD	Y	10	22	10.81-	52	10.81-	54			GLOB	UNIF	WV	0	2
811	LOAD	Z	10	22	10.81	04	10.81	04			GLOB	UNIF	WV	0	2
812	LOAD	X	10	22	21.63-	1	10.81-	1			GLOB	UNIF	WV	0	2
813	LOAD	Y	10	22	21.63-	54	10.81-	57			GLOB	UNIF	WV	0	2
814	LOAD	Z	10	22	21.63	04	10.81	05			GLOB	UNIF	WV	0	2
815	LOAD	X	22	34	0.00-	1	10.81-	1			GLOB	UNIF	WV	0	2
816	LOAD	Y	22	34	0.00-	57	10.81-	62			GLOB	UNIF	WV	0	2
817	LOAD	Z	22	34	0.00	05	10.81	05			GLOB	UNIF	WV	0	2
818	LOAD	X	22	34	10.81-	1	10.81-	1			GLOB	UNIF	WV	0	2
819	LOAD	Y	22	34	10.81-	62	10.81-	68			GLOB	UNIF	WV	0	2
820	LOAD	Z	22	34	10.81	05	10.81	05			GLOB	UNIF	WV	0	2
821	LOAD	X	22	34	21.63-	1	10.81-	1			GLOB	UNIF	WV	0	2
822	LOAD	Y	22	34	21.63-	68	10.81-	76			GLOB	UNIF	WV	0	2
823	LOAD	Z	22	34	21.63	05	10.81	06			GLOB	UNIF	WV	0	2
824	LOAD	X	34	40	0.00-	1	4.73-	1			GLOB	UNIF	WV	0	2
825	LOAD	Y	34	40	0.00-	78	4.73-	82			GLOB	UNIF	WV	0	2
826	LOAD	Z	34	40	0.00	05	4.73	06			GLOB	UNIF	WV	0	2
827	LOAD	X	34	40	4.73-	1	4.73-	1			GLOB	UNIF	WV	0	2
828	LOAD	Y	34	40	4.73-	82	4.73-	87			GLOB	UNIF	WV	0	2
829	LOAD	Z	34	40	4.73	06	4.73	06			GLOB	UNIF	WV	0	2
830	LOAD	X	34	40	9.45-	1	4.73-	1			GLOB	UNIF	WV	0	2
831	LOAD	Y	34	40	9.45-	87	4.73-	93			GLOB	UNIF	WV	0	2
832	LOAD	Z	34	40	9.45	06	4.73	06			GLOB	UNIF	WV	0	2
833	LOAD	X	40	49	0.00-	1	6.09-	1			GLOB	UNIF	WV	0	2

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LINE NO.											
834	LOAD Y	40	49	0.00-	92	6.09-	101	GLOB UNIF	WV	0	2
835	LOAD Z	40	49	0.00	08	6.09	09	GLOB UNIF	WV	0	2
836	LOAD X	40	49	6.09-	1	6.09-	1	GLOB UNIF	WV	0	2
837	LOAD Y	40	49	6.09-	101	6.09-	111	GLOB UNIF	WV	0	2
838	LOAD Z	40	49	6.09	09	6.09	10	GLOB UNIF	WV	0	2
839	LOAD X	40	49	12.17-	1	6.09-	02	GLOB UNIF	WV	0	2
840	LOAD Y	40	49	12.17-	111	6.09-	123	GLOB UNIF	WV	0	2
841	LOAD Z	40	49	12.17	10	6.09	11	GLOB UNIF	WV	0	2
842	LOAD X	49	55	0.00-	1	1.52-	1	GLOB UNIF	WV	0	2
843	LOAD Y	49	55	0.00-	123	1.52-	126	GLOB UNIF	WV	0	2
844	LOAD Z	49	55	0.00	10	1.52	10	GLOB UNIF	WV	0	2
845	LOAD X	49	55	1.52-	1	1.52-	1	GLOB UNIF	WV	0	2
846	LOAD Y	49	55	1.52-	126	1.52-	129	GLOB UNIF	WV	0	2
847	LOAD Z	49	55	1.52	10	1.52	11	GLOB UNIF	WV	0	2
848	LOAD X	49	55	3.04-	1	1.52-	02	GLOB UNIF	WV	0	2
849	LOAD Y	49	55	3.04-	129	1.52-	133	GLOB UNIF	WV	0	2
850	LOAD Z	49	55	3.04	11	1.52	11	GLOB UNIF	WV	0	2
851	LOAD X	12	24	0.00	1	10.81	1	GLOB UNIF	WV	0	2
852	LOAD Y	12	24	0.00-	51	10.81-	52	GLOB UNIF	WV	0	2
853	LOAD Z	12	24	0.00	04	10.81	04	GLOB UNIF	WV	0	2
854	LOAD X	12	24	10.81	1	10.81	1	GLOB UNIF	WV	0	2
855	LOAD Y	12	24	10.81-	52	10.81-	54	GLOB UNIF	WV	0	2
856	LOAD Z	12	24	10.81	04	10.81	04	GLOB UNIF	WV	0	2
857	LOAD X	12	24	21.63	1	10.81	1	GLOB UNIF	WV	0	2
858	LOAD Y	12	24	21.63-	54	10.81-	57	GLOB UNIF	WV	0	2
859	LOAD Z	12	24	21.63	04	10.81	05	GLOB UNIF	WV	0	2
860	LOAD X	24	36	0.00	1	10.81	1	GLOB UNIF	WV	0	2
861	LOAD Y	24	36	0.00-	57	10.81-	62	GLOB UNIF	WV	0	2
862	LOAD Z	24	36	0.00	05	10.81	05	GLOB UNIF	WV	0	2
863	LOAD X	24	36	10.81	1	10.81	1	GLOB UNIF	WV	0	2
864	LOAD Y	24	36	10.81-	62	10.81-	68	GLOB UNIF	WV	0	2
865	LOAD Z	24	36	10.81	05	10.81	05	GLOB UNIF	WV	0	2
866	LOAD X	24	36	21.63	1	10.81	1	GLOB UNIF	WV	0	2
867	LOAD Y	24	36	21.63-	68	10.81-	76	GLOB UNIF	WV	0	2
868	LOAD Z	24	36	21.63	05	10.81	06	GLOB UNIF	WV	0	2
869	LOAD X	36	41	0.00	1	4.73	1	GLOB UNIF	WV	0	2
870	LOAD Y	36	41	0.00-	78	4.73-	82	GLOB UNIF	WV	0	2
871	LOAD Z	36	41	0.00	05	4.73	06	GLOB UNIF	WV	0	2
872	LOAD X	36	41	4.73	1	4.73	1	GLOB UNIF	WV	0	2
873	LOAD Y	36	41	4.73-	82	4.73-	87	GLOB UNIF	WV	0	2
874	LOAD Z	36	41	4.73	06	4.73	06	GLOB UNIF	WV	0	2
875	LOAD X	36	41	9.45	1	4.73	1	GLOB UNIF	WV	0	2
876	LOAD Y	36	41	9.45-	87	4.73-	93	GLOB UNIF	WV	0	2
877	LOAD Z	36	41	9.45	06	4.73	06	GLOB UNIF	WV	0	2
878	LOAD X	41	51	0.00	1	6.09	1	GLOB UNIF	WV	0	2
879	LOAD Y	41	51	0.00-	92	6.09-	101	GLOB UNIF	WV	0	2
880	LOAD Z	41	51	0.00	08	6.09	09	GLOB UNIF	WV	0	2
881	LOAD X	41	51	6.09	1	6.09	1	GLOB UNIF	WV	0	2
882	LOAD Y	41	51	6.09-	101	6.09-	111	GLOB UNIF	WV	0	2

3-PILE ACAR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0

883	LOAD Z	41	51	6,09	09	6,09	10	GLOB UNIF	WV	0	2
884	LOAD X	41	51	12,17	1	6,09	02	GLOB UNIF	WV	0	2
885	LOAD Y	41	51	12,17-	111	6,09-	123	GLOB UNIF	WV	0	2
886	LOAD Z	41	51	12,17	10	6,09	11	GLOB UNIF	WV	0	2
887	LOAD X	51	56	0,00	1	1,52	1	GLOB UNIF	WV	0	2
888	LOAD Y	51	56	0,00-	123	1,52-	126	GLOB UNIF	WV	0	2
889	LOAD Z	51	56	0,00	10	1,52	10	GLOB UNIF	WV	0	2
890	LOAD X	51	56	1,52	1	1,52	1	GLOB UNIF	WV	0	2
891	LOAD Y	51	56	1,52-	126	1,52-	129	GLOB UNIF	WV	0	2
892	LOAD Z	51	56	1,52	10	1,52	11	GLOB UNIF	WV	0	2
893	LOAD X	51	56	3,04	1	1,52	02	GLOB UNIF	WV	0	2
894	LOAD Y	51	56	3,04-	129	1,52-	133	GLOB UNIF	WV	0	2
895	LOAD Z	51	56	3,04	11	1,52	11	GLOB UNIF	WV	0	2
896	LOAD Y	14	26	0,00-	39	10,81-	41	GLOB UNIF	WV	0	2
897	LOAD Z	14	26	0,00-	07	10,81-	07	GLOB UNIF	WV	0	2
898	LOAD Y	14	26	10,81-	41	10,81-	42	GLOB UNIF	WV	0	2
899	LOAD Z	14	26	10,81-	07	10,81-	07	GLOB UNIF	WV	0	2
900	LOAD Y	14	26	21,63-	42	10,81-	46	GLOB UNIF	WV	0	2
901	LOAD Z	14	26	21,63-	07	10,81-	08	GLOB UNIF	WV	0	2
902	LOAD Y	26	38	0,00-	45	10,86-	47	GLOB UNIF	WV	0	2
903	LOAD Z	26	38	0,00	09	10,86	09	GLOB UNIF	WV	0	2
904	LOAD Y	26	38	10,86-	47	10,86-	51	GLOB UNIF	WV	0	2
905	LOAD Z	26	38	10,86	09	10,86	10	GLOB UNIF	WV	0	2
906	LOAD Y	26	38	21,72-	51	10,86-	55	GLOB UNIF	WV	0	2
907	LOAD Z	26	38	21,72	10	10,86	10	GLOB UNIF	WV	0	2
908	LOAD Y	38	42	0,00-	51	5,01-	55	GLOB UNIF	WV	0	2
909	LOAD Z	38	42	0,00-	20	5,01-	21	GLOB UNIF	WV	0	2
910	LOAD Y	38	42	5,01-	55	5,01-	59	GLOB UNIF	WV	0	2
911	LOAD Z	38	42	5,01-	21	5,01-	23	GLOB UNIF	WV	0	2
912	LOAD Y	38	42	10,02-	59	5,01-	64	GLOB UNIF	WV	0	2
913	LOAD Z	38	42	10,02-	23	5,01-	25	GLOB UNIF	WV	0	2
914	LOAD Y	42	53	0,00-	53	5,31-	58	GLOB UNIF	WV	0	2
915	LOAD Z	42	53	0,00-	33	5,31-	36	GLOB UNIF	WV	0	2
916	LOAD Y	42	53	5,31-	58	5,31-	64	GLOB UNIF	WV	0	2
917	LOAD Z	42	53	5,31-	36	5,31-	40	GLOB UNIF	WV	0	2
918	LOAD Y	42	53	10,63-	64	5,31-	70	GLOB UNIF	WV	0	2
919	LOAD Z	42	53	10,63-	40	5,31-	44	GLOB UNIF	WV	0	2
920	LOAD Y	42	53	15,94-	70	5,31-	78	GLOB UNIF	WV	0	2
921	LOAD Z	42	53	15,94-	44	5,31-	49	GLOB UNIF	WV	0	2
922	LOAD Y	53	57	0,00-	106	1,52-	109	GLOB UNIF	WV	0	2
923	LOAD Z	53	57	0,00-	18	1,52-	18	GLOB UNIF	WV	0	2
924	LOAD Y	53	57	1,52-	109	1,52-	113	GLOB UNIF	WV	0	2
925	LOAD Z	53	57	1,52-	18	1,52-	19	GLOB UNIF	WV	0	2
926	LOAD Y	53	57	3,04-	113	1,52-	116	GLOB UNIF	WV	0	2
927	LOAD Z	53	57	3,04-	19	1,52-	19	GLOB UNIF	WV	0	2
928	LOAD Y	10	11	0,00-	23	9,67-	23	GLOB UNIF	WV	0	2
929	LOAD Y	10	11	9,67-	23	9,67-	23	GLOB UNIF	WV	0	2
930	LOAD Y	10	11	19,33-	23	9,67-	23	GLOB UNIF	WV	0	2
931	LOAD Y	11	12	0,00-	23	9,67-	23	GLOB UNIF	WV	0	2

3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0

932	LOAD	Y	11	12	9.67-	23	9.67-	23	GLOB UNIF	WV 0 2
933	LOAD	Y	11	12	19.33-	23	9.67-	23	GLOB UNIF	WV 0 2
934	LOAD	X	12	13	0.00	10	9.67	10	GLOB UNIF	WV 0 2
935	LOAD	Y	12	13	0.00-	06	9.67-	06	GLOB UNIF	WV 0 2
936	LOAD	X	12	13	9.67	10	9.67	10	GLOB UNIF	WV 0 2
937	LOAD	Y	12	13	9.67-	06	9.67-	06	GLOB UNIF	WV 0 2
938	LOAD	X	12	13	19.33	10	9.67	09	GLOB UNIF	WV 0 2
939	LOAD	Y	12	13	19.33-	06	9.67-	05	GLOB UNIF	WV 0 2
940	LOAD	X	13	14	0.00	09	9.67	09	GLOB UNIF	WV 0 2
941	LOAD	Y	13	14	0.00-	05	9.67-	05	GLOB UNIF	WV 0 2
942	LOAD	X	13	14	9.67	09	9.67	08	GLOB UNIF	WV 0 2
943	LOAD	Y	13	14	9.67-	05	9.67-	05	GLOB UNIF	WV 0 2
944	LOAD	X	13	14	19.34	08	9.67	08	GLOB UNIF	WV 0 2
945	LOAD	Y	13	14	19.34-	05	9.67-	05	GLOB UNIF	WV 0 2
946	LOAD	X	14	15	0.00-	08	9.67-	08	GLOB UNIF	WV 0 2
947	LOAD	Y	14	15	0.00-	05	9.67-	05	GLOB UNIF	WV 0 2
948	LOAD	X	14	15	9.67-	08	9.67-	09	GLOB UNIF	WV 0 2
949	LOAD	Y	14	15	9.67-	05	9.67-	05	GLOB UNIF	WV 0 2
950	LOAD	X	14	15	19.34-	09	9.67-	09	GLOB UNIF	WV 0 2
951	LOAD	Y	14	15	19.34-	05	9.67-	05	GLOB UNIF	WV 0 2
952	LOAD	X	15	10	0.00-	09	9.67-	10	GLOB UNIF	WV 0 2
953	LOAD	Y	15	10	0.00-	05	9.67-	06	GLOB UNIF	WV 0 2
954	LOAD	X	15	10	9.67-	10	9.67-	10	GLOB UNIF	WV 0 2
955	LOAD	Y	15	10	9.67-	06	9.67-	06	GLOB UNIF	WV 0 2
956	LOAD	X	15	10	19.33-	10	9.67-	10	GLOB UNIF	WV 0 2
957	LOAD	Y	15	10	19.33-	06	9.67-	06	GLOB UNIF	WV 0 2
958	LOAD	X	11	13	0.00-	08	9.67-	08	GLOB UNIF	WV 0 2
959	LOAD	Y	11	13	0.00-	04	9.67-	04	GLOB UNIF	WV 0 2
960	LOAD	X	11	13	9.67-	08	9.67-	07	GLOB UNIF	WV 0 2
961	LOAD	Y	11	13	9.67-	04	9.67-	04	GLOB UNIF	WV 0 2
962	LOAD	X	11	13	19.33-	07	9.67-	07	GLOB UNIF	WV 0 2
963	LOAD	Y	11	13	19.33-	04	9.67-	04	GLOB UNIF	WV 0 2
964	LOAD	Y	13	15	0.00-	17	9.67-	17	GLOB UNIF	WV 0 2
965	LOAD	Y	13	15	9.67-	17	9.67-	17	GLOB UNIF	WV 0 2
966	LOAD	Y	13	15	19.33-	17	9.67-	17	GLOB UNIF	WV 0 2
967	LOAD	X	15	11	0.00	07	9.67	07	GLOB UNIF	WV 0 2
968	LOAD	Y	15	11	0.00-	04	9.67-	04	GLOB UNIF	WV 0 2
969	LOAD	X	15	11	9.67	07	9.67	08	GLOB UNIF	WV 0 2
970	LOAD	Y	15	11	9.67-	04	9.67-	04	GLOB UNIF	WV 0 2
971	LOAD	X	15	11	19.33	08	9.67	08	GLOB UNIF	WV 0 2
972	LOAD	Y	15	11	19.33-	04	9.67-	04	GLOB UNIF	WV 0 2
973	LOAD	Y	22	23	0.00-	26	8.15-	26	GLOB UNIF	WV 0 2
974	LOAD	Y	22	23	8.13-	26	8.15-	26	GLOB UNIF	WV 0 2
975	LOAD	Y	22	23	16.25-	26	8.15-	26	GLOB UNIF	WV 0 2
976	LOAD	Y	23	24	0.00-	26	8.15-	26	GLOB UNIF	WV 0 2
977	LOAD	Y	23	24	8.13-	26	8.13-	26	GLOB UNIF	WV 0 2
978	LOAD	Y	23	24	16.25-	26	8.13-	26	GLOB UNIF	WV 0 2
979	LOAD	X	24	25	0.00	11	8.13	11	GLOB UNIF	WV 0 2
980	LOAD	Y	24	25	0.00-	06	8.13-	06	GLOB UNIF	WV 0 2

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3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0

LINE NO.												
981	LOAD X	24	25	8.13	11	8.13	11	GLOB UNIF	WV	0	2
982	LOAD Y	24	25	8.13-	06	8.13-	06	GLOB UNIF	WV	0	2
983	LOAD X	24	25	16.25	11	8.13	11	GLOB UNIF	WV	0	2
984	LOAD Y	24	25	16.25-	06	8.13-	06	GLOB UNIF	WV	0	2
985	LOAD X	25	26	0.00	11	8.13	10	GLOB UNIF	WV	0	2
986	LOAD Y	25	26	0.00-	06	8.13-	06	GLOB UNIF	WV	0	2
987	LOAD X	25	26	8.13	10	8.13	10	GLOB UNIF	WV	0	2
988	LOAD Y	25	26	8.13-	06	8.13-	06	GLOB UNIF	WV	0	2
989	LOAD X	25	26	16.25	10	8.13	09	GLOB UNIF	WV	0	2
990	LOAD Y	25	26	16.25-	06	8.13-	05	GLOB UNIF	WV	0	2
991	LOAD X	26	27	0.00-	09	8.13-	10	GLOB UNIF	WV	0	2
992	LOAD Y	26	27	0.00-	05	8.13-	06	GLOB UNIF	WV	0	2
993	LOAD X	26	27	8.13-	10	8.13-	10	GLOB UNIF	WV	0	2
994	LOAD Y	26	27	8.13-	06	8.13-	06	GLOB UNIF	WV	0	2
995	LOAD X	26	27	16.25-	10	8.13-	11	GLOB UNIF	WV	0	2
996	LOAD Y	26	27	16.25-	06	8.13-	06	GLOB UNIF	WV	0	2
997	LOAD X	27	22	0.00-	11	8.13-	11	GLOB UNIF	WV	0	2
998	LOAD Y	27	22	0.00-	06	8.13-	06	GLOB UNIF	WV	0	2
999	LOAD X	27	22	8.13-	11	8.13-	11	GLOB UNIF	WV	0	2
1000	LOAD Y	27	22	8.13-	06	8.13-	06	GLOB UNIF	WV	0	2
1001	LOAD X	27	22	16.25-	11	8.13-	11	GLOB UNIF	WV	0	2
1002	LOAD Y	27	22	16.25-	06	8.13-	06	GLOB UNIF	WV	0	2
1003	LOAD X	23	25	0.00-	09	8.13-	09	GLOB UNIF	WV	0	2
1004	LOAD Y	23	25	0.00-	05	8.13-	05	GLOB UNIF	WV	0	2
1005	LOAD X	23	25	8.13-	09	8.13-	08	GLOB UNIF	WV	0	2
1006	LOAD Y	23	25	8.13-	05	8.13-	05	GLOB UNIF	WV	0	2
1007	LOAD X	23	25	16.25-	08	8.13-	08	GLOB UNIF	WV	0	2
1008	LOAD Y	23	25	16.25-	05	8.13-	05	GLOB UNIF	WV	0	2
1009	LOAD Y	25	27	0.00-	19	8.13-	19	GLOB UNIF	WV	0	2
1010	LOAD Y	25	27	8.13-	19	8.13-	19	GLOB UNIF	WV	0	2
1011	LOAD Y	25	27	16.25-	19	8.13-	19	GLOB UNIF	WV	0	2
1012	LOAD X	27	23	0.00	08	8.13	08	GLOB UNIF	WV	0	2
1013	LOAD Y	27	23	0.00-	05	8.13-	05	GLOB UNIF	WV	0	2
1014	LOAD X	27	23	8.13	08	8.13	09	GLOB UNIF	WV	0	2
1015	LOAD Y	27	23	8.13-	05	8.13-	05	GLOB UNIF	WV	0	2
1016	LOAD X	27	23	16.25	09	8.13	09	GLOB UNIF	WV	0	2
1017	LOAD Y	27	23	16.25-	05	8.13-	05	GLOB UNIF	WV	0	2
1018	LOAD Y	34	35	0.00-	24	6.59-	24	GLOB UNIF	WV	0	2
1019	LOAD Y	34	35	6.59-	24	6.59-	24	GLOB UNIF	WV	0	2
1020	LOAD Y	34	35	13.18-	24	6.59-	24	GLOB UNIF	WV	0	2
1021	LOAD Y	35	36	0.00-	24	6.59-	24	GLOB UNIF	WV	0	2
1022	LOAD Y	35	36	6.59-	24	6.59-	24	GLOB UNIF	WV	0	2
1023	LOAD Y	35	36	13.18-	24	6.59-	24	GLOB UNIF	WV	0	2
1024	LOAD X	36	37	0.00	10	6.59	10	GLOB UNIF	WV	0	2
1025	LOAD Y	36	37	0.00-	06	6.59-	06	GLOB UNIF	WV	0	2
1026	LOAD X	36	37	6.59	10	6.59	10	GLOB UNIF	WV	0	2
1027	LOAD Y	36	37	6.59-	06	6.59-	06	GLOB UNIF	WV	0	2
1028	LOAD X	36	37	13.18	10	6.59	10	GLOB UNIF	WV	0	2
1029	LOAD Y	36	37	13.18-	06	6.59-	06	GLOB UNIF	WV	0	2

3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

LINE NO.	1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0									
1030	LOAD X	37	38	0.00	07	10.07	07	GLOB UNIF	WV 0 2
1031	LOAD Y	37	38	0.00-	02	10.07-	02	GLOB UNIF	WV 0 2
1032	LOAD X	37	38	10.07	07	10.07	06	GLOB UNIF	WV 0 2
1033	LOAD Y	37	38	10.07-	02	10.07-	02	GLOB UNIF	WV 0 2
1034	LOAD X	37	38	20.15	06	10.07	06	GLOB UNIF	WV 0 2
1035	LOAD Y	37	38	20.15-	02	10.07-	02	GLOB UNIF	WV 0 2
1036	LOAD X	38	39	0.00-	06	10.07-	06	GLOB UNIF	WV 0 2
1037	LOAD Y	38	39	0.00-	02	10.07-	02	GLOB UNIF	WV 0 2
1038	LOAD X	38	39	10.07-	06	10.07-	07	GLOB UNIF	WV 0 2
1039	LOAD Y	38	39	10.07-	02	10.07-	02	GLOB UNIF	WV 0 2
1040	LOAD X	38	39	20.15-	07	10.07-	07	GLOB UNIF	WV 0 2
1041	LOAD Y	38	39	20.15-	02	10.07-	02	GLOB UNIF	WV 0 2
1042	LOAD X	39	34	0.00-	10	6.59-	10	GLOB UNIF	WV 0 2
1043	LOAD Y	39	34	0.00-	06	6.59-	06	GLOB UNIF	WV 0 2
1044	LOAD X	39	34	6.59-	10	6.59-	10	GLOB UNIF	WV 0 2
1045	LOAD Y	39	34	6.59-	06	6.59-	06	GLOB UNIF	WV 0 2
1046	LOAD X	39	34	13.18-	10	6.59-	10	GLOB UNIF	WV 0 2
1047	LOAD Y	39	34	13.18-	06	6.59-	06	GLOB UNIF	WV 0 2
1048	LOAD X	35	37	0.00-	10	6.59-	10	GLOB UNIF	WV 0 2
1049	LOAD Y	35	37	0.00-	06	6.59-	06	GLOB UNIF	WV 0 2
1050	LOAD X	35	37	6.59-	10	6.59-	10	GLOB UNIF	WV 0 2
1051	LOAD Y	35	37	6.59-	06	6.59-	06	GLOB UNIF	WV 0 2
1052	LOAD X	35	37	13.18-	10	6.59-	10	GLOB UNIF	WV 0 2
1053	LOAD Y	35	37	13.18-	06	6.59-	06	GLOB UNIF	WV 0 2
1054	LOAD Y	37	39	0.00-	23	6.59-	23	GLOB UNIF	WV 0 2
1055	LOAD Y	37	39	6.59-	23	6.59-	23	GLOB UNIF	WV 0 2
1056	LOAD Y	37	39	13.17-	23	6.59-	23	GLOB UNIF	WV 0 2
1057	LOAD X	39	35	0.00	10	6.59	10	GLOB UNIF	WV 0 2
1058	LOAD Y	39	35	0.00-	06	6.59-	06	GLOB UNIF	WV 0 2
1059	LOAD X	39	35	6.59	10	6.59	10	GLOB UNIF	WV 0 2
1060	LOAD Y	39	35	6.59-	06	6.59-	06	GLOB UNIF	WV 0 2
1061	LOAD X	39	35	13.18	10	6.59	10	GLOB UNIF	WV 0 2
1062	LOAD Y	39	35	13.18-	06	6.59-	06	GLOB UNIF	WV 0 2
1063	LOAD Y	49	50	0.00-	48	5.05-	48	GLOB UNIF	WV 0 2
1064	LOAD Y	49	50	5.05-	48	5.05-	48	GLOB UNIF	WV 0 2
1065	LOAD Y	49	50	10.10-	48	5.05-	48	GLOB UNIF	WV 0 2
1066	LOAD Y	50	51	0.00-	48	5.05-	48	GLOB UNIF	WV 0 2
1067	LOAD Y	50	51	5.05-	48	5.05-	48	GLOB UNIF	WV 0 2
1068	LOAD Y	50	51	10.10-	48	5.05-	48	GLOB UNIF	WV 0 2
1069	LOAD X	51	52	0.00	21	5.05	21	GLOB UNIF	WV 0 2
1070	LOAD Y	51	52	0.00-	12	5.05-	12	GLOB UNIF	WV 0 2
1071	LOAD X	51	52	5.05	21	5.05	20	GLOB UNIF	WV 0 2
1072	LOAD Y	51	52	5.05-	12	5.05-	12	GLOB UNIF	WV 0 2
1073	LOAD X	51	52	10.10	20	5.05	20	GLOB UNIF	WV 0 2
1074	LOAD Y	51	52	10.10-	12	5.05-	12	GLOB UNIF	WV 0 2
1075	LOAD X	52	53	0.00	20	5.05	20	GLOB UNIF	WV 0 2
1076	LOAD Y	52	53	0.00-	12	5.05-	11	GLOB UNIF	WV 0 2
1077	LOAD X	52	53	5.05	20	5.05	19	GLOB UNIF	WV 0 2
1078	LOAD Y	52	53	5.05-	11	5.05-	11	GLOB UNIF	WV 0 2

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3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

LINE NO.	1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0									
1079	LOAD X	52	53	10.10	19	5.05	18	GLOB UNIF	WV 0 2
1080	LOAD Y	52	53	10.10-	11	5.05-	11	GLOB UNIF	WV 0 2
1081	LOAD X	53	54	0.00-	18	5.05-	19	GLOB UNIF	WV 0 2
1082	LOAD Y	53	54	0.00-	11	5.05-	11	GLOB UNIF	WV 0 2
1083	LOAD X	53	54	5.05-	19	5.05-	20	GLOB UNIF	WV 0 2
1084	LOAD Y	53	54	5.05-	11	5.05-	11	GLOB UNIF	WV 0 2
1085	LOAD X	53	54	10.10-	20	5.05-	20	GLOB UNIF	WV 0 2
1086	LOAD Y	53	54	10.10-	11	5.05-	12	GLOB UNIF	WV 0 2
1087	LOAD X	54	49	0.00-	20	5.05-	20	GLOB UNIF	WV 0 2
1088	LOAD Y	54	49	0.00-	12	5.05-	12	GLOB UNIF	WV 0 2
1089	LOAD X	54	49	5.05-	20	5.05-	21	GLOB UNIF	WV 0 2
1090	LOAD Y	54	49	5.05-	12	5.05-	12	GLOB UNIF	WV 0 2
1091	LOAD X	54	49	10.10-	21	5.05-	21	GLOB UNIF	WV 0 2
1092	LOAD Y	54	49	10.10-	12	5.05-	12	GLOB UNIF	WV 0 2
1093	LOAD X	50	52	0.00-	17	5.05-	16	GLOB UNIF	WV 0 2
1094	LOAD Y	50	52	0.00-	10	5.05-	09	GLOB UNIF	WV 0 2
1095	LOAD X	50	52	5.05-	16	5.05-	16	GLOB UNIF	WV 0 2
1096	LOAD Y	50	52	5.05-	09	5.05-	09	GLOB UNIF	WV 0 2
1097	LOAD X	50	52	10.10-	16	5.05-	16	GLOB UNIF	WV 0 2
1098	LOAD Y	50	52	10.10-	09	5.05-	09	GLOB UNIF	WV 0 2
1099	LOAD Y	52	54	0.00-	37	5.05-	37	GLOB UNIF	WV 0 2
1100	LOAD Y	52	54	5.05-	37	5.05-	37	GLOB UNIF	WV 0 2
1101	LOAD Y	52	54	10.09-	37	5.05-	37	GLOB UNIF	WV 0 2
1102	LOAD X	54	50	0.00	16	5.05	16	GLOB UNIF	WV 0 2
1103	LOAD Y	54	50	0.00-	09	5.05-	09	GLOB UNIF	WV 0 2
1104	LOAD X	54	50	5.05	16	5.05	16	GLOB UNIF	WV 0 2
1105	LOAD Y	54	50	5.05-	09	5.05-	09	GLOB UNIF	WV 0 2
1106	LOAD X	54	50	10.10	16	5.05	17	GLOB UNIF	WV 0 2
1107	LOAD Y	54	50	10.10-	09	5.05-	10	GLOB UNIF	WV 0 2
1108	LOAD X	11	22	0.00	1	13.44	1	GLOB UNIF	WV 0 2
1109	LOAD Y	11	22	0.00-	21	13.44-	21	GLOB UNIF	WV 0 2
1110	LOAD Z	11	22	0.00	1	13.44	1	GLOB UNIF	WV 0 2
1111	LOAD X	11	22	13.44	1	13.44	1	GLOB UNIF	WV 0 2
1112	LOAD Y	11	22	13.44-	21	13.44-	22	GLOB UNIF	WV 0 2
1113	LOAD Z	11	22	13.44	1	13.44	1	GLOB UNIF	WV 0 2
1114	LOAD X	11	22	26.88	1	13.44	1	GLOB UNIF	WV 0 2
1115	LOAD Y	11	22	26.88-	22	13.44-	23	GLOB UNIF	WV 0 2
1116	LOAD Z	11	22	26.88	1	13.44	1	GLOB UNIF	WV 0 2
1117	LOAD X	11	24	0.00-	1	13.44-	1	GLOB UNIF	WV 0 2
1118	LOAD Y	11	24	0.00-	21	13.44-	21	GLOB UNIF	WV 0 2
1119	LOAD Z	11	24	0.00	1	13.44	1	GLOB UNIF	WV 0 2
1120	LOAD X	11	24	13.44-	1	13.44-	1	GLOB UNIF	WV 0 2
1121	LOAD Y	11	24	13.44-	21	13.44-	22	GLOB UNIF	WV 0 2
1122	LOAD Z	11	24	13.44	1	13.44	1	GLOB UNIF	WV 0 2
1123	LOAD X	11	24	26.88-	1	13.44-	1	GLOB UNIF	WV 0 2
1124	LOAD Y	11	24	26.88-	22	13.44-	23	GLOB UNIF	WV 0 2
1125	LOAD Z	11	24	26.88	1	13.44	1	GLOB UNIF	WV 0 2
1126	LOAD X	13	24	0.00	03	13.44	03	GLOB UNIF	WV 0 2
1127	LOAD Y	13	24	0.00-	13	13.44-	14	GLOB UNIF	WV 0 2

3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0

1128	LOAD Z	13	24	0.00-	08	13.44-	09	GLOB UNIF	WV 0	2
1129	LOAD X	13	24	13.44	03	13.44	03	GLOB UNIF	WV 0	2
1130	LOAD Y	13	24	13.44-	14	13.44-	15	GLOB UNIF	WV 0	2
1131	LOAD Z	13	24	13.44-	09	13.44-	09	GLOB UNIF	WV 0	2
1132	LOAD X	13	24	26.88	03	13.44	03	GLOB UNIF	WV 0	2
1133	LOAD Y	13	24	26.88-	15	13.44-	16	GLOB UNIF	WV 0	2
1134	LOAD Z	13	24	26.88-	09	13.44-	10	GLOB UNIF	WV 0	2
1135	LOAD X	13	26	0.00	03	13.44	03	GLOB UNIF	WV 0	2
1136	LOAD Y	13	26	0.00-	15	13.44-	14	GLOB UNIF	WV 0	2
1137	LOAD Z	13	26	0.00	07	13.44	07	GLOB UNIF	WV 0	2
1138	LOAD X	13	26	13.44	03	13.44	03	GLOB UNIF	WV 0	2
1139	LOAD Y	13	26	13.44-	14	13.44-	14	GLOB UNIF	WV 0	2
1140	LOAD Z	13	26	13.44	07	13.44	07	GLOB UNIF	WV 0	2
1141	LOAD X	13	26	26.88	03	13.44	03	GLOB UNIF	WV 0	2
1142	LOAD Y	13	26	26.88-	14	13.44-	14	GLOB UNIF	WV 0	2
1143	LOAD Z	13	26	26.88	07	13.44	07	GLOB UNIF	WV 0	2
1144	LOAD X	15	26	0.00-	03	13.44-	03	GLOB UNIF	WV 0	2
1145	LOAD Y	15	26	0.00-	15	13.44-	14	GLOB UNIF	WV 0	2
1146	LOAD Z	15	26	0.00	07	13.44	07	GLOB UNIF	WV 0	2
1147	LOAD X	15	26	13.44-	03	13.44-	03	GLOB UNIF	WV 0	2
1148	LOAD Y	15	26	13.44-	14	13.44-	14	GLOB UNIF	WV 0	2
1149	LOAD Z	15	26	13.44	07	13.44	07	GLOB UNIF	WV 0	2
1150	LOAD X	15	26	26.88-	03	13.44-	03	GLOB UNIF	WV 0	2
1151	LOAD Y	15	26	26.88-	14	13.44-	14	GLOB UNIF	WV 0	2
1152	LOAD Z	15	26	26.88	07	13.44	07	GLOB UNIF	WV 0	2
1153	LOAD X	15	22	0.00-	03	13.44-	03	GLOB UNIF	WV 0	2
1154	LOAD Y	15	22	0.00-	13	13.44-	14	GLOB UNIF	WV 0	2
1155	LOAD Z	15	22	0.00-	08	13.44-	09	GLOB UNIF	WV 0	2
1156	LOAD X	15	22	13.44-	03	13.44-	-03	GLOB UNIF	WV 0	2
1157	LOAD Y	15	22	13.44-	14	13.44-	15	GLOB UNIF	WV 0	2
1158	LOAD Z	15	22	13.44-	09	13.44-	09	GLOB UNIF	WV 0	2
1159	LOAD X	15	22	26.88-	03	13.44-	03	GLOB UNIF	WV 0	2
1160	LOAD Y	15	22	26.88-	15	13.44-	16	GLOB UNIF	WV 0	2
1161	LOAD Z	15	22	26.88-	09	13.44-	10	GLOB UNIF	WV 0	2
1162	LOAD X	22	36	0.00-	1	18.20-	1	GLOB UNIF	WV 0	2
1163	LOAD Y	22	36	0.00-	29	18.20-	31	GLOB UNIF	WV 0	2
1164	LOAD Z	22	36	0.00	1	18.20	1	GLOB UNIF	WV 0	2
1165	LOAD X	22	36	18.20-	1	18.20-	1	GLOB UNIF	WV 0	2
1166	LOAD Y	22	36	18.20-	31	18.20-	50	GLOB UNIF	WV 0	2
1167	LOAD Z	22	36	18.20	1	18.20	1	GLOB UNIF	WV 0	2
1168	LOAD X	22	36	36.39-	1	18.20-	1	GLOB UNIF	WV 0	2
1169	LOAD Y	22	36	36.39-	34	18.20-	38	GLOB UNIF	WV 0	2
1170	LOAD Z	22	36	36.39	1	18.20	1	GLOB UNIF	WV 0	2
1171	LOAD X	24	38	0.00	09	20.96	09	GLOB UNIF	WV 0	2
1172	LOAD Y	24	38	0.00-	12	20.96-	12	GLOB UNIF	WV 0	2
1173	LOAD Z	24	38	0.00	11	20.96	12	GLOB UNIF	WV 0	2
1174	LOAD X	24	38	20.96	09	20.96	09	GLOB UNIF	WV 0	2
1175	LOAD Y	24	38	20.96-	12	20.96-	12	GLOB UNIF	WV 0	2
1176	LOAD Z	24	38	20.96	12	20.96	12	GLOB UNIF	WV 0	2

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LINE NO.	1...5....1....1....2....2....3....3....4....4....5....5....6....6....7....7....8									
1177	LOAD X	24	38	41.93	09	20.96	08	GLOB UNIF	WV 0 2	
1178	LOAD Y	24	38	41.93-	12	20.96-	12	GLOB UNIF	WV 0 2	
1179	LOAD Z	24	38	41.93	12	20.96	11	GLOB UNIF	WV 0 2	
1180	LOAD X	26	34	0.00-	06	13.65-	07	GLOB UNIF	WV 0 2	
1181	LOAD Y	26	34	0.00-	11	13.65-	13	GLOB UNIF	WV 0 2	
1182	LOAD Z	26	34	0.00-	10	13.65-	11	GLOB UNIF	WV 0 2	
1183	LOAD X	26	34	13.65-	07	13.65-	08	GLOB UNIF	WV 0 2	
1184	LOAD Y	26	34	13.65-	13	13.65-	14	GLOB UNIF	WV 0 2	
1185	LOAD Z	26	34	13.65-	11	13.65-	13	GLOB UNIF	WV 0 2	
1186	LOAD X	26	34	27.29-	08	13.65-	09	GLOB UNIF	WV 0 2	
1187	LOAD Y	26	34	27.29-	14	13.65-	16	GLOB UNIF	WV 0 2	
1188	LOAD Z	26	34	27.29-	13	13.65-	14	GLOB UNIF	WV 0 2	
1189	LOAD X	26	34	40.94-	09	13.65-	10	GLOB UNIF	WV 0 2	
1190	LOAD Y	26	34	40.94-	16	13.65-	18	GLOB UNIF	WV 0 2	
1191	LOAD Z	26	34	40.94-	14	13.65-	16	GLOB UNIF	WV 0 2	
1192	LOAD X	36	49	0.00	02	11.86	02	GLOB UNIF	WV 0 2	
1193	LOAD Y	36	49	0.00-	38	11.86-	42	GLOB UNIF	WV 0 2	
1194	LOAD Z	36	49	0.00	1	11.86	02	GLOB UNIF	WV 0 2	
1195	LOAD X	36	49	11.86	02	11.86	02	GLOB UNIF	WV 0 2	
1196	LOAD Y	36	49	11.86-	42	11.86-	46	GLOB UNIF	WV 0 2	
1197	LOAD Z	36	49	11.86	02	11.86	02	GLOB UNIF	WV 0 2	
1198	LOAD X	36	49	23.72	02	11.86	02	GLOB UNIF	WV 0 2	
1199	LOAD Y	36	49	23.72-	46	11.86-	53	GLOB UNIF	WV 0 2	
1200	LOAD Z	36	49	23.72	02	11.86	02	GLOB UNIF	WV 0 2	
1201	LOAD X	36	49	35.58	02	11.86	02	GLOB UNIF	WV 0 2	
1202	LOAD Y	36	49	35.58-	53	11.86-	60	GLOB UNIF	WV 0 2	
1203	LOAD Z	36	49	35.58	02	11.86	02	GLOB UNIF	WV 0 2	
1204	LOAD X	38	51	0.00	06	9.29	07	GLOB UNIF	WV 0 2	
1205	LOAD Y	38	51	0.00-	11	9.29-	13	GLOB UNIF	WV 0 2	
1206	LOAD Z	38	51	0.00-	13	9.29-	15	GLOB UNIF	WV 0 2	
1207	LOAD X	38	51	9.29	07	9.29	08	GLOB UNIF	WV 0 2	
1208	LOAD Y	38	51	9.29-	13	9.29-	15	GLOB UNIF	WV 0 2	
1209	LOAD Z	38	51	9.29-	15	9.29-	17	GLOB UNIF	WV 0 2	
1210	LOAD X	38	51	18.57	08	9.29	09	GLOB UNIF	WV 0 2	
1211	LOAD Y	38	51	18.57-	15	9.29-	17	GLOB UNIF	WV 0 2	
1212	LOAD Z	38	51	18.57-	17	9.29-	19	GLOB UNIF	WV 0 2	
1213	LOAD X	38	51	27.86	09	9.29	10	GLOB UNIF	WV 0 2	
1214	LOAD Y	38	51	27.86-	17	9.29-	19	GLOB UNIF	WV 0 2	
1215	LOAD Z	38	51	27.86-	19	9.29-	21	GLOB UNIF	WV 0 2	
1216	LOAD X	38	51	37.14	10	9.29	11	GLOB UNIF	WV 0 2	
1217	LOAD Y	38	51	37.14-	19	9.29-	22	GLOB UNIF	WV 0 2	
1218	LOAD Z	38	51	37.14-	21	9.29-	24	GLOB UNIF	WV 0 2	
1219	LOAD X	38	51	46.43	11	9.29	13	GLOB UNIF	WV 0 2	
1220	LOAD Y	38	51	46.43-	22	9.29-	24	GLOB UNIF	WV 0 2	
1221	LOAD Z	38	51	46.43-	24	9.29-	27	GLOB UNIF	WV 0 2	
1222	LOAD X	34	53	0.00-	10	15.81-	11	GLOB UNIF	WV 0 2	
1223	LOAD Y	34	53	0.00-	24	15.81-	27	GLOB UNIF	WV 0 2	
1224	LOAD Z	34	53	0.00	16	15.81	17	GLOB UNIF	WV 0 2	
1225	LOAD X	34	53	15.81-	11	15.81-	12	GLOB UNIF	WV 0 2	

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LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0
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LINE NO.												
1226	LOAD Y	34	53	15.81-	27	15.81-	30	GLOB UNIF	WV	0	2
1227	LOAD Z	34	53	15.81	17	15.81	20	GLOB UNIF	WV	0	2
1228	LOAD X	34	53	31.62-	12	15.81-	13	GLOB UNIF	WV	0	2
1229	LOAD Y	34	53	31.62-	30	15.81-	33	GLOB UNIF	WV	0	2
1230	LOAD Z	34	53	31.62	20	15.81	22	GLOB UNIF	WV	0	2
1231	LOAD Y	55	58	0.00-	117	5.70-	130	GLOB UNIF	WV	0	2
1232	LOAD Y	55	58	5.70-	130	5.70-	146	GLOB UNIF	WV	0	2
1233	LOAD Y	55	58	11.40-	146	5.70-	163	GLOB UNIF	WV	0	2
1234	LOAD Y	55	58	17.10-	163	5.70-	185	GLOB UNIF	WV	0	2
1235	LOAD Y	55	58	22.80-	185	5.70-	210	GLOB UNIF	WV	0	2
1236	LOAD Y	58	61	0.00-	210	3.97-	229	GLOB UNIF	WV	0	2
1237	LOAD Y	58	61	3.97-	229	3.97-	248	GLOB UNIF	WV	0	2
1238	LOAD Y	58	61	7.95-	248	3.97-	275	GLOB UNIF	WV	0	2
1239	LOAD Y	56	59	0.00-	117	5.70-	130	GLOB UNIF	WV	0	2
1240	LOAD Y	56	59	5.70-	130	5.70-	146	GLOB UNIF	WV	0	2
1241	LOAD Y	56	59	11.40-	146	5.70-	163	GLOB UNIF	WV	0	2
1242	LOAD Y	56	59	17.10-	163	5.70-	185	GLOB UNIF	WV	0	2
1243	LOAD Y	56	59	22.80-	185	5.70-	210	GLOB UNIF	WV	0	2
1244	LOAD Y	59	64	0.00-	210	3.97-	229	GLOB UNIF	WV	0	2
1245	LOAD Y	59	64	3.97-	229	3.97-	248	GLOB UNIF	WV	0	2
1246	LOAD Y	59	64	7.95-	248	3.97-	275	GLOB UNIF	WV	0	2
1247	LOAD Y	57	60	0.00-	104	5.70-	116	GLOB UNIF	WV	0	2
1248	LOAD Y	57	60	5.70-	116	5.70-	129	GLOB UNIF	WV	0	2
1249	LOAD Y	57	60	11.40-	129	5.70-	144	GLOB UNIF	WV	0	2
1250	LOAD Y	57	60	17.10-	144	5.70-	163	GLOB UNIF	WV	0	2
1251	LOAD Y	57	60	22.80-	163	5.70-	183	GLOB UNIF	WV	0	2
1252	LOAD Y	60	70	0.00-	183	2.00-	192	GLOB UNIF	WV	0	2
1253	LOAD Y	60	70	2.00-	192	2.00-	201	GLOB UNIF	WV	0	2
1254	LOAD Y	60	70	4.00-	201	2.00-	209	GLOB UNIF	WV	0	2
1255	LOAD Y	70	67	0.00-	209	1.35-	215	GLOB UNIF	WV	0	2
1256	LOAD Y	70	67	1.35-	215	1.35-	223	GLOB UNIF	WV	0	2
1257	LOAD Y	70	67	2.71-	223	1.35-	231	GLOB UNIF	WV	0	2
1258	LOAD Y	58	59	0.00-	74	9.67-	74	GLOB UNIF	WV	0	2
1259	LOAD Y	58	59	9.67-	74	9.67-	74	GLOB UNIF	WV	0	2
1260	LOAD Y	58	59	19.33-	74	9.67-	74	GLOB UNIF	WV	0	2
1261	LOAD X	59	60	0.00	32	9.67	31	GLOB UNIF	WV	0	2
1262	LOAD Y	59	60	0.00-	19	9.67-	18	GLOB UNIF	WV	0	2
1263	LOAD X	59	60	9.67	31	9.67	30	GLOB UNIF	WV	0	2
1264	LOAD Y	59	60	9.67-	18	9.67-	17	GLOB UNIF	WV	0	2
1265	LOAD X	59	60	19.33	30	9.67	28	GLOB UNIF	WV	0	2
1266	LOAD Y	59	60	19.33-	17	9.67-	16	GLOB UNIF	WV	0	2
1267	LOAD X	60	58	0.00-	28	9.67-	30	GLOB UNIF	WV	0	2
1268	LOAD Y	60	58	0.00-	16	9.67-	17	GLOB UNIF	WV	0	2
1269	LOAD X	60	58	9.67-	30	9.67-	31	GLOB UNIF	WV	0	2
1270	LOAD Y	60	58	9.67-	17	9.67-	18	GLOB UNIF	WV	0	2
1271	LOAD X	60	58	19.33-	31	9.67-	32	GLOB UNIF	WV	0	2
1272	LOAD Y	60	58	19.33-	18	9.67-	19	GLOB UNIF	WV	0	2
1273	LOAD Y	59	61	0.00-	74	8.65-	81	GLOB UNIF	WV	0	2
1274	LOAD Y	59	61	8.65-	81	8.65-	88	GLOB UNIF	WV	0	2

3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0

LINE NO.											
1275	LOAD	Y	59	61	17.29-	88	8.65-	97	GLOB UNIF	WV	0 2
1276	LOAD	X	60	64	0.00	22	6.25	25	GLOB UNIF	WV	0 2
1277	LOAD	Y	60	64	0.00-	26	6.25-	29	GLOB UNIF	WV	0 2
1278	LOAD	Z	60	64	0.00-	23	6.25-	25	GLOB UNIF	WV	0 2
1279	LOAD	X	60	64	6.25	25	6.25	27	GLOB UNIF	WV	0 2
1280	LOAD	Y	60	64	6.25-	29	6.25-	32	GLOB UNIF	WV	0 2
1281	LOAD	Z	60	64	6.25-	25	6.25-	28	GLOB UNIF	WV	0 2
1282	LOAD	X	60	64	12.49	27	6.25	30	GLOB UNIF	WV	0 2
1283	LOAD	Y	60	64	12.49-	32	6.25-	36	GLOB UNIF	WV	0 2
1284	LOAD	Z	60	64	12.49-	28	6.25-	31	GLOB UNIF	WV	0 2
1285	LOAD	X	60	64	18.74	30	6.25	33	GLOB UNIF	WV	0 2
1286	LOAD	Y	60	64	18.74-	36	6.25-	39	GLOB UNIF	WV	0 2
1287	LOAD	Z	60	64	18.74-	31	6.25-	34	GLOB UNIF	WV	0 2
1288	LOAD	X	58	67	0.00-	25	7.69-	27	GLOB UNIF	WV	0 2
1289	LOAD	Y	58	67	0.00-	30	7.69-	32	GLOB UNIF	WV	0 2
1290	LOAD	Z	58	67	0.00	26	7.69	28	GLOB UNIF	WV	0 2
1291	LOAD	X	58	67	7.69-	27	7.69-	28	GLOB UNIF	WV	0 2
1292	LOAD	Y	58	67	7.69-	32	7.69-	34	GLOB UNIF	WV	0 2
1293	LOAD	Z	58	67	7.69	28	7.69	29	GLOB UNIF	WV	0 2
1294	LOAD	X	58	67	15.38-	28	7.69-	30	GLOB UNIF	WV	0 2
1295	LOAD	Y	58	67	15.38-	34	7.69-	36	GLOB UNIF	WV	0 2
1296	LOAD	Z	58	67	15.38	29	7.69	31	GLOB UNIF	WV	0 2
1297	LOAD	Y	70	66	0.00-	38	2.02-	40	GLOB UNIF	WV	0 2
1298	LOAD	Y	70	66	2.02-	40	2.02-	41	GLOB UNIF	WV	0 2
1299	LOAD	Y	70	66	4.04-	41	2.02-	43	GLOB UNIF	WV	0 2
1300	LOAD	Y	70	68	0.00-	38	2.02-	40	GLOB UNIF	WV	0 2
1301	LOAD	Y	70	68	2.02-	40	2.02-	41	GLOB UNIF	WV	0 2
1302	LOAD	Y	70	68	4.04-	41	2.02-	43	GLOB UNIF	WV	0 2
1303	LOADCN		3								
1304	LOAD	Z	1	4	0.00	-.557	6.06	-.557	GLOB UNIF	DL	0 3
1305	LOAD	Z	4	16	0.00	-.557	32.44	-.557	GLOB UNIF	DL	0 3
1306	LOAD	Z	16	28	0.00	-.403	32.44	-.403	GLOB UNIF	DL	0 3
1307	LOAD	Z	28	43	0.00	-.403	32.44	-.403	GLOB UNIF	DL	0 3
1308	LOAD	Z	43	55	0.00	-.403	4.59	-.403	GLOB UNIF	DL	0 3
1309	LOAD	Z	2	5	0.00	-.557	6.06	-.557	GLOB UNIF	DL	0 3
1310	LOAD	Z	5	17	0.00	-.557	32.44	-.557	GLOB UNIF	DL	0 3
1311	LOAD	Z	17	29	0.00	-.403	32.44	-.403	GLOB UNIF	DL	0 3
1312	LOAD	Z	29	44	0.00	-.403	32.44	-.403	GLOB UNIF	DL	0 3
1313	LOAD	Z	44	56	0.00	-.403	4.59	-.403	GLOB UNIF	DL	0 3
1314	LOAD	Z	3	6	0.00	-.557	6.07	-.557	GLOB UNIF	DL	0 3
1315	LOAD	Z	6	18	0.00	-.557	32.44	-.557	GLOB UNIF	DL	0 3
1316	LOAD	Z	18	30	0.00	-.403	32.58	-.403	GLOB UNIF	DL	0 3
1317	LOAD	Z	30	45	0.00	-.403	36.13	-.403	GLOB UNIF	DL	0 3
1318	LOAD	Z	45	57	0.00	-.403	4.58	-.403	GLOB UNIF	DL	0 3
1319	LOAD	Z	10	22	0.00	-.183	32.44	-.183	GLOB UNIF	DL	0 3
1320	LOAD	Z	22	34	0.00	-.183	32.44	-.183	GLOB UNIF	DL	0 3
1321	LOAD	Z	34	40	0.00	-.371	14.18	-.371	GLOB UNIF	DL	0 3
1322	LOAD	Z	40	49	0.00	-.371	18.26	-.371	GLOB UNIF	DL	0 3
1323	LOAD	Z	49	55	0.00	-.371	4.56	-.371	GLOB UNIF	DL	0 3

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3-PILE AC'R STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

LINE NO.										
1324	LOAD Z	12	24	0.00	-.183	32.40	-.183	GLOB UNIF	DL 0 3
1325	LOAD Z	24	36	0.00	-.183	32.40	-.183	GLOB UNIF	DL 0 3
1326	LOAD Z	36	41	0.00	-.371	14.14	-.371	GLOB UNIF	DL 0 3
1327	LOAD Z	41	51	0.00	-.371	18.26	-.371	GLOB UNIF	DL 0 3
1328	LOAD Z	51	56	0.00	-.371	4.56	-.371	GLOB UNIF	DL 0 3
1329	LOAD Z	14	26	0.00	-.183	32.40	-.183	GLOB UNIF	DL 0 3
1330	LOAD Z	26	38	0.00	-.183	32.58	-.183	GLOB UNIF	DL 0 3
1331	LOAD Z	38	42	0.00	-.371	15.03	-.371	GLOB UNIF	DL 0 3
1332	LOAD Z	42	53	0.00	-.371	21.26	-.371	GLOB UNIF	DL 0 3
1333	LOAD Z	53	57	0.00	-.371	4.56	-.371	GLOB UNIF	DL 0 3
1334	LOAD Z	10	11	1.71	-.081	25.58	-.081	GLOB UNIF	DL 0 3
1335	LOAD Z	11	12	1.71	-.081	25.58	-.081	GLOB UNIF	DL 0 3
1336	LOAD Z	12	13	1.71	-.081	25.58	-.081	GLOB UNIF	DL 0 3
1337	LOAD Z	13	14	1.71	-.081	25.58	-.081	GLOB UNIF	DL 0 3
1338	LOAD Z	14	15	1.71	-.081	25.58	-.081	GLOB UNIF	DL 0 3
1339	LOAD Z	15	10	1.71	-.081	25.58	-.081	GLOB UNIF	DL 0 3
1340	LOAD Z	11	13	1.41	-.047	26.17	-.047	GLOB UNIF	DL 0 3
1341	LOAD Z	13	15	1.41	-.047	26.17	-.047	GLOB UNIF	DL 0 3
1342	LOAD Z	15	11	1.41	-.047	26.17	-.047	GLOB UNIF	DL 0 3
1343	LOAD Z	22	23	1.71	-.081	20.96	-.081	GLOB UNIF	DL 0 3
1344	LOAD Z	23	24	1.71	-.081	20.96	-.081	GLOB UNIF	DL 0 3
1345	LOAD Z	24	25	1.71	-.081	20.96	-.081	GLOB UNIF	DL 0 3
1346	LOAD Z	25	26	1.71	-.081	20.96	-.081	GLOB UNIF	DL 0 3
1347	LOAD Z	26	27	1.71	-.081	20.96	-.081	GLOB UNIF	DL 0 3
1348	LOAD Z	27	22	1.71	-.081	20.96	-.081	GLOB UNIF	DL 0 3
1349	LOAD Z	23	25	1.41	-.047	21.55	-.047	GLOB UNIF	DL 0 3
1350	LOAD Z	25	27	1.41	-.047	21.55	-.047	GLOB UNIF	DL 0 3
1351	LOAD Z	27	23	1.41	-.047	21.55	-.047	GLOB UNIF	DL 0 3
1352	LOAD Z	34	35	1.71	-.057	16.35	-.057	GLOB UNIF	DL 0 3
1353	LOAD Z	35	36	1.71	-.057	16.35	-.057	GLOB UNIF	DL 0 3
1354	LOAD Z	36	37	1.71	-.057	16.35	-.057	GLOB UNIF	DL 0 3
1355	LOAD Z	37	38	1.71	-.057	26.80	-.057	GLOB UNIF	DL 0 3
1356	LOAD Z	38	39	1.71	-.057	26.80	-.057	GLOB UNIF	DL 0 3
1357	LOAD Z	39	34	1.71	-.057	16.35	-.057	GLOB UNIF	DL 0 3
1358	LOAD Z	35	37	1.71	-.043	16.35	-.043	GLOB UNIF	DL 0 3
1359	LOAD Z	37	39	1.71	-.043	16.34	-.043	GLOB UNIF	DL 0 3
1360	LOAD Z	39	35	1.71	-.043	16.35	-.043	GLOB UNIF	DL 0 3
1361	LOAD Z	49	50	1.71	-.072	11.73	-.072	GLOB UNIF	DL 0 3
1362	LOAD Z	50	51	1.71	-.072	11.73	-.072	GLOB UNIF	DL 0 3
1363	LOAD Z	51	52	1.71	-.072	11.73	-.072	GLOB UNIF	DL 0 3
1364	LOAD Z	52	53	1.71	-.072	11.73	-.072	GLOB UNIF	DL 0 3
1365	LOAD Z	53	54	1.71	-.072	11.73	-.072	GLOB UNIF	DL 0 3
1366	LOAD Z	54	49	1.71	-.072	11.73	-.072	GLOB UNIF	DL 0 3
1367	LOAD Z	50	52	1.71	-.057	11.73	-.057	GLOB UNIF	DL 0 3
1368	LOAD Z	52	54	1.71	-.057	11.72	-.057	GLOB UNIF	DL 0 3
1369	LOAD Z	54	50	1.71	-.057	11.73	-.057	GLOB UNIF	DL 0 3
1370	LOAD Z	11	22	1.71	-.072	36.90	-.072	GLOB UNIF	DL 0 3
1371	LOAD Z	11	24	1.71	-.072	36.90	-.072	GLOB UNIF	DL 0 3
1372	LOAD Z	13	24	1.71	-.072	36.89	-.072	GLOB UNIF	DL 0 3

3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

```
                  1    1    2    2    3    3    4    4    5    5    6    6    7    7    8
LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....(....5....0
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LINE NO.										
1373	LOAD Z	13	26	1.71	-.072	36.90	-.072	GLOB UNIF	DL 0 3	
1374	LOAD Z	15	26	1.71	-.072	36.90	-.072	GLOB UNIF	DL 0 3	
1375	LOAD Z	15	22	1.71	-.072	36.89	-.072	GLOB UNIF	DL 0 3	
1376	LOAD Z	22	36	2.42	-.112	49.76	-.112	GLOB UNIF	DL 0 3	
1377	LOAD Z	24	38	2.42	-.112	58.06	-.112	GLOB UNIF	DL 0 3	
1378	LOAD Z	26	34	2.42	-.112	49.76	-.112	GLOB UNIF	DL 0 3	
1379	LOAD Z	36	49	2.42	-.112	42.61	-.112	GLOB UNIF	DL 0 3	
1380	LOAD Z	38	51	2.42	-.112	50.89	-.112	GLOB UNIF	DL 0 3	
1381	LOAD Z	34	53	2.42	-.112	42.60	-.112	GLOB UNIF	DL 0 3	
1382	LOAD Z	4	7	0.00	-.148	2.40	-.148	GLOB UNIF	DL 0 3	
1383	LOAD Z	7	10	0.00	-.148	2.50	-.148	GLOB UNIF	DL 0 3	
1384	LOAD Z	5	8	0.00	-.148	2.40	-.148	GLOB UNIF	DL 0 3	
1385	LOAD Z	8	12	0.00	-.148	2.50	-.148	GLOB UNIF	DL 0 3	
1386	LOAD Z	6	9	0.00	-.148	2.40	-.148	GLOB UNIF	DL 0 3	
1387	LOAD Z	9	14	0.00	-.148	2.50	-.148	GLOB UNIF	DL 0 3	
1388	LOAD Z	16	19	0.00	-.148	2.40	-.148	GLOB UNIF	DL 0 3	
1389	LOAD Z	19	22	0.00	-.148	2.50	-.148	GLOB UNIF	DL 0 3	
1390	LOAD Z	17	20	0.00	-.148	2.40	-.148	GLOB UNIF	DL 0 3	
1391	LOAD Z	20	24	0.00	-.148	2.50	-.148	GLOB UNIF	DL 0 3	
1392	LOAD Z	18	21	0.00	-.148	2.40	-.148	GLOB UNIF	DL 0 3	
1393	LOAD Z	21	26	0.00	-.148	2.50	-.148	GLOB UNIF	DL 0 3	
1394	LOAD Z	28	31	0.00	-.148	2.40	-.148	GLOB UNIF	DL 0 3	
1395	LOAD Z	31	34	0.00	-.148	2.50	-.148	GLOB UNIF	DL 0 3	
1396	LOAD Z	29	32	0.00	-.148	2.40	-.148	GLOB UNIF	DL 0 3	
1397	LOAD Z	32	36	0.00	-.148	2.50	-.148	GLOB UNIF	DL 0 3	
1398	LOAD Z	30	33	0.00	-.148	2.40	-.148	GLOB UNIF	DL 0 3	
1399	LOAD Z	35	38	0.00	-.148	2.50	-.148	GLOB UNIF	DL 0 3	
1400	LOAD Z	43	46	0.00	-.148	2.40	-.148	GLOB UNIF	DL 0 3	
1401	LOAD Z	46	49	0.00	-.148	2.50	-.148	GLOB UNIF	DL 0 3	
1402	LOAD Z	44	47	0.00	-.148	2.40	-.148	GLOB UNIF	DL 0 3	
1403	LOAD Z	47	51	0.00	-.148	2.50	-.148	GLOB UNIF	DL 0 3	
1404	LOAD Z	45	48	0.00	-.148	2.40	-.148	GLOB UNIF	DL 0 3	
1405	LOAD Z	48	53	0.00	-.148	2.50	-.148	GLOB UNIF	DL 0 3	
1406	LOAD Z	55	58	0.00	-.403	23.00	-.403	GLOB UNIF	DL 0 3	
1407	LOAD Z	55	58	23.00	-.464	5.50	-.464	GLOB UNIF	DL 0 3	
1408	LOAD Z	58	61	0.00	-.464	15.00	-.464	GLOB UNIF	DL 0 3	
1409	LOAD Z	61	71	0.00	-.464	15.00	-.464	GLOB UNIF	DL 0 3	
1410	LOAD Z	56	59	0.00	-.403	23.00	-.403	GLOB UNIF	DL 0 3	
1411	LOAD Z	56	59	23.00	-.464	5.50	-.464	GLOB UNIF	DL 0 3	
1412	LOAD Z	59	64	0.00	-.464	15.00	-.464	GLOB UNIF	DL 0 3	
1413	LOAD Z	64	72	0.00	-.464	15.00	-.464	GLOB UNIF	DL 0 3	
1414	LOAD Z	57	60	0.00	-.403	23.00	-.403	GLOB UNIF	DL 0 3	
1415	LOAD Z	57	60	23.00	-.464	5.50	-.464	GLOB UNIF	DL 0 3	
1416	LOAD Z	60	70	0.00	-.464	6.00	-.464	GLOB UNIF	DL 0 3	
1417	LOAD Z	70	67	0.00	-.464	9.00	-.464	GLOB UNIF	DL 0 3	
1418	LOAD Z	67	76	0.00	-.464	4.00	-.464	GLOB UNIF	DL 0 3	
1419	LOAD Z	76	75	0.00	-.464	11.00	-.464	GLOB UNIF	DL 0 3	
1420	LOAD Z	58	59	1.71	-.065	25.58	-.065	GLOB UNIF	DL 0 3	
1421	LOAD Z	59	60	1.71	-.065	25.58	-.065	GLOB UNIF	DL 0 3	

S T R A I   I N P U T   D A T A

3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

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                  1    1    2    2    3    3    4    4    5    5    6    6    7    7    8
LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0

    1422  LOAD Z   60  58   1.71  -.065  25.58  -.065             GLOB UNIF   DL 0 3
    1423  LOAD Z   59  61   1.71  -.065  29.23  -.065             GLOB UNIF   DL 0 3
    1424  LOAD Z   60  64   1.71  -.065  29.23  -.065             GLOB UNIF   DL 0 3
    1425  LOAD Z   58  67   1.71  -.065  29.23  -.065             GLOB UNIF   DL 0 3
    1426  LOAD Z   70  66   1.59  -.019  10.27  -.019             GLOB UNIF   DL 0 3
    1427  LOAD Z   70  68   1.59  -.019  10.27  -.019             GLOB UNIF   DL 0 3
    1428  LOAD Z   76  77   1.71  -.050  14.78  -.050             GLOB UNIF   DL 0 3
    1429  LOAD Z   76  78   1.71  -.050  14.78  -.050             GLOB UNIF   DL 0 3
    1430  LOAD Z   61  62   0.00  -.055   4.50  -.055             GLOB UNIF   DL 0 3
    1431  LOAD Z   62  63   0.00  -.055  20.00  -.055             GLOB UNIF   DL 0 3
    1432  LOAD Z   63  64   0.00  -.055   4.50  -.055             GLOB UNIF   DL 0 3
    1433  LOAD Z   64  65   0.00  -.055   8.75  -.055             GLOB UNIF   DL 0 3
    1434  LOAD Z   65  67   0.00  -.055  20.25  -.055             GLOB UNIF   DL 0 3
    1435  LOAD Z   67  69   0.00  -.055  20.25  -.055             GLOB UNIF   DL 0 3
    1436  LOAD Z   69  61   0.00  -.055   8.75  -.055             GLOB UNIF   DL 0 3
    1437  LOAD Z   63  65   0.00  -.024   7.50  -.024             GLOB UNIF   DL 0 3
    1438  LOAD Z   65  66   0.00  -.024  17.61  -.024             GLOB UNIF   DL 0 3
    1439  LOAD Z   66  67   0.00  -.024  10.00  -.024             GLOB UNIF   DL 0 3
    1440  LOAD Z   67  68   0.00  -.024  10.00  -.024             GLOB UNIF   DL 0 3
    1441  LOAD Z   68  69   0.00  -.024  17.61  -.024             GLOB UNIF   DL 0 3
    1442  LOAD Z   69  62   0.00  -.024   7.50  -.024             GLOB UNIF   DL 0 3
    1443  LOAD Z   71  73   0.00  -.055   3.00  -.055             GLOB UNIF   DL 0 3
    1444  LOAD Z   71  72   0.00  -.055  29.00  -.055             GLOB UNIF   DL 0 3
    1445  LOAD Z   72  74   0.00  -.055   3.00  -.055             GLOB UNIF   DL 0 3
    1446  LOAD Z   71  81   0.00  -.055   5.00  -.055             GLOB UNIF   DL 0 3
    1447  LOAD Z   71  77   0.00  -.055  25.11  -.055             GLOB UNIF   DL 0 3
    1448  LOAD Z   77  83   0.00  -.055   5.00  -.055             GLOB UNIF   DL 0 3
    1449  LOAD Z   72  82   0.00  -.055   5.00  -.055             GLOB UNIF   DL 0 3
    1450  LOAD Z   72  78   0.00  -.055  25.11  -.055             GLOB UNIF   DL 0 3
    1451  LOAD Z   78  84   0.00  -.055   5.00  -.055             GLOB UNIF   DL 0 3
    1452  LOAD Z   77  79   0.00  -.055   3.00  -.055             GLOB UNIF   DL 0 3
    1453  LOAD Z   77  75   0.00  -.055  14.50  -.055             GLOB UNIF   DL 0 3
    1454  LOAD Z   75  78   0.00  -.055  14.50  -.055             GLOB UNIF   DL 0 3
    1455  LOAD Z   78  80   0.00  -.055   3.00  -.055             GLOB UNIF   DL 0 3
    1456  LOAD Z   71  75   0.00  -.016  29.00  -.016             GLOB UNIF   DL 0 3
    1457  LOAD Z   72  75   0.00  -.016  29.00  -.016             GLOB UNIF   DL 0 3
    1458  LOADCN   4
    1459  LOAD Y   40  49    89    242                            GLOB CONC BOAT LNG
    1460  LOAD Y   41  51    89    242                            GLOB CONC BOAT LNG
    1461  LOAD Y   55  58   242    406                            GLOB CONC STAIRS
    1462  LOAD Y   56  59   242    406                            GLOB CONC STAIRS
    1463  LOADCN   5
    1464  LOAD Z   61  62           -13                           GLOB UNIF ADD DEAD
    1465  LOAD Z   62  63           -13                           GLOB UNIF ADD DEAD
    1466  LOAD Z   63  64           -13                           GLOB UNIF ADD DEAD
    1467  LOAD Z   64  65           -13                           GLOB UNIF ADD DEAD
    1468  LOAD Z   65  67           -13                           GLOB UNIF ADD DEAD
    1469  LOAD Z   67  69           -13                           GLOB UNIF ADD DEAD
    1470  LOAD Z   69  61           -13                           GLOB UNIF ADD DEAD
```

S T R A N   I N P U T   D A T A

3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

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                1   1   2   2   3   3   4   4   5   5   6   6   7   7   8
LINE NO. 1...5....0....5....0....5....0....5....0....5....0....5....0....5....0

   1471  LOAD Z   61  71    15    -793                          GLOB CONC  ADD DEAD
   1472  LOAD Z   64  72    15    -793                          GLOB CONC  ADD DEAD
   1473  LOAD Z   76  75    15    -793                          GLOB CONC  ADD DEAD
   1474  LOADCN   6
   1475  LOAD Z   61  62           -86                          GLOB UNIF  LIVE LDS
   1476  LOAD Z   62  63           -86                          GLOB UNIF  LIVE LDS
   1477  LOAD Z   63  64           -86                          GLOB UNIF  LIVE LDS
   1478  LOAD Z   64  65           -86                          GLOB UNIF  LIVE LDS
   1479  LOAD Z   65  67           -86                          GLOB UNIF  LIVE LDS
   1480  LOAD Z   67  69           -86                          GLOB UNIF  LIVE LDS
   1481  LOAD Z   69  61           -86                          GLOB UNIF  LIVE LDS
   1482  LOAD Z   61  71    15   -4083                          GLOB CONC  LIVE LDS
   1483  LOAD Z   64  72    15   -4083                          GLOB CONC  LIVE LDS
   1484  LOAD Z   76  75    15   -4083                          GLOB CONC  LIVE LDS
   1485  LOCOMB
   1486  LOCOMB   7 100.    2 100.    3-100.    4 100.    5                MAX TENS
   1487  LOCOMB   8 100.    1 100.    3 100.    4 100.    5 100.    6      MAX COMP
   1488  END
```

STRAN - JOINT DEFLECTIONS AND ROTATIONS

LOAD CONDITION NO. 1

5-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

JOINT NUMBER	DEFLECTION IN INCHES X	DEFLECTION IN INCHES Y	DEFLECTION IN INCHES Z	ROTATION IN RADIANS X	ROTATION IN RADIANS Y	ROTATION IN RADIANS Z	REMARKS
1	0.00000	0.00000	0.00000	-.00437	-.00079	-.00091	
2	0.00000	0.00000	0.00000	-.00456	-.00043	.00101	
3	0.00000	0.00000	0.00000	-.00500	-.00065	.00047	
4	-.05329	.31334	-.01898	-.00395	-.00077	-.00086	
5	-.03533	.32816	-.00871	-.00415	-.00045	.00096	
6	-.04145	.34606	.03331	-.00431	-.00065	.00047	
7	-.96415	.35424	.23043	-.00262	.00063	-.00086	
8	-.83822	.29750	.52287	-.00297	.00021	.00096	
9	-.97180	.35101	-.85048	-.00224	.00003	.00047	
10	-.93833	.35729	.15196	-.00262	.00063	-.00086	
11	-.90151	.44294	.31612	-.00324	.00038	.00007	
12	-.86699	.30040	.43364	-.00297	.00021	.00096	
13	-.93522	.41510	-.23892	-.00239	-.00027	.00018	
14	-.95779	.35617	-.78328	-.00224	.00003	.00046	
15	-.92155	.44754	-.29163	-.00225	.00082	-.00008	
16	-.29041	1.36297	-.09181	-.00220	-.00053	-.00070	
17	-.24264	1.44661	-.02342	-.00223	-.00051	.00074	
18	-.24229	1.30623	.09657	-.00247	-.00055	.00059	
19	-.73731	1.37886	.17583	-.00257	.00033	-.00072	
20	-.75246	1.42675	.40551	-.00264	.00045	.00075	
21	-.91751	1.31360	-.71756	-.00319	.00014	.00059	
22	-.71558	1.37796	.09876	-.00257	.00033	-.00073	
23	-.74542	1.36513	.22114	-.00196	.00039	-.00007	
24	-.77506	1.42598	.32635	-.00264	.00045	.00076	
25	-.77783	1.34196	-.13244	-.00137	-.00014	.00005	
26	-.89962	1.32128	-.62184	-.00319	.00014	.00060	
27	-.76976	1.37423	-.22420	-.00125	.00078	.00026	
28	-.40823	2.27734	-.11675	-.00175	-.00016	-.00045	
29	-.41704	2.29648	-.00165	-.00150	-.00027	.00057	
30	-.44444	2.44937	-.25768	-.00168	-.00024	.00060	
31	-.61276	2.28683	.04865	-.00102	.00043	-.00046	
32	-.56957	2.29104	.18895	-.00131	.00055	.00058	
33	-.82109	2.43271	-.70191	-.00015	.00083	.00060	
34	-.59896	2.28783	.00611	-.00142	.00043	-.00046	
35	-.58989	2.35953	.06688	-.00160	.00023	.00001	
36	-.58712	2.29199	.14978	-.00131	.00055	.00059	
37	-.61524	2.33308	-.23096	-.00166	.00052	.00053	
38	-.80319	2.41535	-.69756	-.00015	.00083	.00060	
39	-.59943	2.37249	-.31712	-.00183	.00024	-.00019	
40	-.51042	2.53343	-.02831	-.00163	.00050	-.00035	
41	-.50924	2.51677	.10284	-.00146	.00047	.00042	
42	-.60023	2.40528	-.64627	-.00096	.00099	.00073	
43	-.38555	3.09363	-.11367	-.00384	.00032	-.00045	
44	-.43480	3.04198	.00596	-.00367	.00020	.00049	
45	-.31630	2.98582	-.15863	-.00392	.00034	.00058	
46	-.40521	3.09401	.01520	-.00386	.00045	-.00046	
47	-.42068	3.04224	.13092	-.00373	.00031	.00050	
48	-.34010	2.98996	-.31399	-.00415	.00059	.00058	

S T R A N - J O I N T D E F L E C T I O N S A N D R O T A T I O N S

LOAD CONDITION NO. 1

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DATE 04/27/76

3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

JOINT NUMBER	DEFLECTION IN INCHES X	DEFLECTION IN INCHES Y	DEFLECTION IN INCHES Z	ROTATION IN RADIANS X	ROTATION IN RADIANS Y	ROTATION IN RADIANS Z	REMARKS
49	-.39126	3.09356	-.10064	-.00386	.00045	-.00047	
50	-.41281	3.03326	-.00706	-.00169	.00031	.00015	
51	-.43577	3.04190	.01904	-.00373	.00031	.00051	
52	-.40200	3.03425	-.07588	.00043	-.00085	-.00045	
53	-.32251	2.99427	-.18962	-.00415	.00059	.00059	
54	-.39670	3.02235	-.15053	.00030	.00167	-.00016	
55	-.36534	3.32910	-.12579	-.00467	.00037	-.00051	
56	-.42280	3.27206	-.01165	-.00458	.00031	.00056	
57	-.29003	3.23364	-.13143	-.00490	.00042	.00056	
58	-.27433	5.04007	-.11881	-.00311	.00036	-.00144	
59	-.26202	4.99027	-.00347	-.00308	.00030	.00156	
60	-.20643	5.02591	-.14587	-.00299	.00023	.00026	
61	-.20049	5.33761	-.11880	-.00075	.00039	-.00159	
62	-.20397	5.33441	-.09812	-.00048	.00038	.00039	
63	-.21967	5.35489	-.01519	-.00054	.00030	.00109	
64	-.22317	5.27982	.00035	-.00081	.00027	.00161	
65	-.32843	5.35506	-.05852	-.00037	.00009	.00046	
66	-.15944	5.35495	-.11648	-.00036	.00030	-.00102	
67	-.15934	5.28675	-.14981	-.00068	.00021	.00031	
68	-.15933	5.33290	-.17886	-.00028	.00026	.00028	
69	-.17107	5.33293	-.13628	-.00031	.00058	-.00000	
70	-.18750	5.18412	-.14745	-.00151	.00028	.00028	
71	-.14195	5.44790	-.11879	-.00053	.00029	-.00158	
72	-.14751	5.42663	.00036	-.00081	.00049	.00160	
73	-.14195	5.39104	-.12931	-.00053	.00029	-.00158	
74	-.14751	5.36916	.01811	-.00081	.00049	.00160	
75	-.13683	5.42637	-.14983	-.00082	.00008	.00030	
76	-.15064	5.32119	-.14983	-.00075	.00015	.00031	
77	-.13661	5.44792	-.16883	-.00007	.00011	.00043	
78	-.13707	5.42648	-.13258	-.00034	.00010	-.00039	
79	-.13661	5.46335	-.17296	-.00007	.00011	.00043	
80	-.13707	5.44039	-.12896	-.00030	.00010	-.00039	
81	-.23673	5.44790	-.08673	-.00053	.00029	-.00158	
82	-.05173	5.42663	.04915	-.00081	.00049	.00160	
83	-.16232	5.44792	-.17299	-.00007	.00011	.00043	
84	-.11390	5.42648	-.15315	-.00034	.00010	-.00039	

S T R A N - J O I N T D E F L E C T I O N S A N D R O T A T I O N S

LOAD CONDITION NO. 2

3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

JOINT NUMBER	DEFLECTION IN INCHES X	DEFLECTION IN INCHES Y	DEFLECTION IN INCHES Z	ROTATION IN RADIANS X	ROTATION IN RADIANS Y	ROTATION IN RADIANS Z	REMARKS
1	0.00000	0.00000	0.00000	.00434	.00062	.00100	
2	0.00000	0.00000	0.00000	.00458	.00026	-.00100	
3	0.00000	0.00000	0.00000	.00498	.00045	-.00042	
4	.04042	-.31212	.01727	.00392	.00060	.00094	
5	.02250	-.32942	.01040	.00417	.00027	-.00095	
6	.02785	-.34493	-.03307	.00429	.00045	-.00042	
7	.71370	-.34310	-.26731	.00263	-.00052	.00094	
8	.58638	-.30872	-.48702	.00300	-.00011	-.00095	
9	.69787	-.34986	.85201	.00226	.00007	-.00042	
10	.68538	-.34614	-.18850	.00263	-.00052	.00094	
11	.64906	-.44283	-.31668	.00336	-.00028	-.00005	
12	.61481	-.31165	-.39753	.00300	-.00011	-.00095	
13	.67286	-.42000	.25954	.00235	.00034	-.00009	
14	.68538	-.35500	.78589	.00220	.00007	-.00041	
15	.65903	-.44090	.27585	.00221	-.00068	.00005	
16	.21187	-1.35924	.08048	.00219	.00038	.00079	
17	.16499	-1.45391	.03474	.00225	.00035	-.00073	
18	.15971	-1.30441	-.09583	.00248	.00038	-.00053	
19	.52640	-1.37017	-.20610	.00256	-.00022	.00080	
20	.54040	-1.43909	-.37493	.00264	-.00035	-.00073	
21	.68475	-1.31182	.72084	.00321	-.00005	-.00054	
22	.50214	-1.36927	-.12939	.00256	-.00022	.00082	
23	.53240	-1.36552	-.22078	.00196	-.00028	.00010	
24	.56246	-1.43831	-.29586	.00264	-.00035	-.00074	
25	.55588	-1.34724	.14728	.00137	.00024	.00000	
26	.66855	-1.31954	.62455	.00321	-.00005	-.00054	
27	.54757	-1.36904	.20096	.00126	-.00068	-.00026	
28	.28298	-2.27101	.09861	.00174	.00008	.00052	
29	.29308	-2.30841	.01967	.00150	.00019	-.00054	
30	.30174	-2.45088	.25961	.00168	.00013	-.00054	
31	.44077	-2.27856	-.07356	.00142	-.00032	.00052	
32	.39632	-2.30503	-.16388	.00130	-.00043	-.00056	
33	.61861	-2.43416	.70537	.00014	-.00073	-.00054	
34	.42501	-2.27956	-.03108	.00142	-.00032	.00053	
35	.41599	-2.36171	-.06665	.00160	-.00013	.00004	
36	.41323	-2.30599	-.12479	.00130	-.00043	-.00057	
37	.43153	-2.34089	.24479	.00167	-.00142	-.00046	
38	.60245	-2.41674	.70129	.00014	-.00073	-.00054	
39	.41587	-2.36895	.30648	.00180	-.00013	.00021	
40	.35514	-2.52713	.20615	.00164	-.00039	.00041	
41	.35428	-2.52969	-.08069	.00146	-.00036	-.00039	
42	.42185	-2.40458	.65077	.00096	-.00089	-.00065	
43	.25123	-3.09173	.09473	.00382	-.00027	.00052	
44	.30148	-3.05715	.11334	.00372	-.00016	-.00045	
45	.16684	-2.99020	.15978	.00395	-.00032	-.00051	
46	.27207	-3.09216	-.03483	.00388	-.00037	.00053	
47	.28764	-3.05737	-.11286	.00377	-.00023	-.00046	
48	.18757	-2.99433	.31626	.00418	-.00054	-.00051	

S T R A N - J O I N T   D E F L E C T I O N S   A N D   R O T A T I O N S

LOAD CONDITION NO. 2

3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

JOINT NUMBER	DEFLECTION IN INCHES X	DEFLECTION IN INCHES Y	DEFLECTION IN INCHES Z	ROTATION IN RADIANS X	ROTATION IN RADIANS Y	ROTATION IN RADIANS Z	REMARKS
49	.25593	-3.09171	.08171	.00388	-.00037	.00054	
50	.27796	-3.03876	.00706	.00170	-.00020	-.00010	
51	.30140	-3.05701	.00034	.00377	-.00023	-.00046	
52	.25964	-3.04399	.08579	-.00045	.00096	.00051	
53	.17215	-2.99864	.19085	.00418	-.00054	-.00052	
54	.25430	-3.02387	.14221	-.00029	-.00158	.00019	
55	.23359	-3.32937	.10753	.00470	-.00031	.00059	
56	.29211	-3.28965	.03012	.00460	-.00025	-.00051	
57	.14757	-3.23984	.13232	.00494	-.00039	-.00049	
58	.16983	-5.05454	.10053	.00313	-.00027	.00153	
59	.15720	-5.03620	.02234	.00314	-.00021	-.00152	
60	.07301	-5.05627	.14706	.00306	-.00017	-.00019	
61	.11448	-5.35314	.10054	.00076	-.00029	.00168	
62	.11791	-5.35926	.08551	.00048	-.00027	-.00019	
63	.13338	-5.40720	.02818	.00054	-.00020	-.00112	
64	.13682	-5.33110	.01842	.00083	-.00016	-.00156	
65	.24239	-5.40743	.07283	.00040	.00006	-.00040	
66	.04031	-5.40755	.12774	.00019	-.00022	.00095	
67	.04022	-5.32253	.15105	.00068	-.00013	-.00025	
68	.04022	-5.35806	.16981	.00013	-.00017	.00006	
69	.06995	-5.35784	.12460	.00035	-.00052	.00015	
70	.05925	-5.21851	.14865	.00155	-.00020	-.00022	
71	.07459	-5.46343	.10052	.00053	-.00019	.00166	
72	.08015	-5.48174	.01839	.00083	-.00039	-.00155	
73	.07459	-5.40358	.10734	.00053	-.00019	.00166	
74	.08015	-5.42608	.00445	.00083	-.00039	-.00155	
75	.03445	-5.46163	.15106	.00082	.00001	-.00024	
76	.03587	-5.35681	.15106	.00074	-.00006	-.00025	
77	.03424	-5.46348	.15368	.00008	-.00002	-.00029	
78	.03471	-5.48157	.15020	.00033	-.00001	.00153	
79	.03424	-5.47394	.15493	.00008	-.00002	-.00029	
80	.03471	-5.50048	.14998	.00033	-.00001	.00153	
81	.17434	-5.46343	.06848	.00053	-.00019	.00166	
82	-.01263	-5.48174	-.03163	.00083	-.00039	-.00155	
83	.05168	-5.46348	.15838	.00008	-.00002	-.00029	
84	.00319	-5.48157	.17017	.00033	-.00001	.00053	

LOAD CONDITION NO. 3

3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

JOINT NUMBER	DEFLECTION IN INCHES X	DEFLECTION IN INCHES Y	DEFLECTION IN INCHES Z	ROTATION IN RADIANS X	ROTATION IN RADIANS Y	ROTATION IN RADIANS Z	REMARKS
1	0.00000	0.00000	0.00000	-.00001	-.00030	-.00000	
2	0.00000	0.00000	0.00000	-.00004	.00038	-.00004	
3	0.00000	0.00000	0.00000	.00003	.00001	.00003	
4	-.02143	.00080	-.00468	-.00002	-.00030	-.00000	
5	.02695	.00242	-.00551	-.00005	.00037	-.00003	
6	.00140	-.00192	-.00239	.00003	.00001	.00003	
7	.04533	-.00202	-.03997	[illegible]	-.00002	-.00000	
8	.04323	.00306	-.05007	-.00003	-.00001	-.00003	
9	.04828	-.00187	-.06942	.00002	-.00004	.00003	
10	.04539	-.00206	-.04015	-.00004	-.00002	-.00000	
11	.04476	-.00081	-.04803	-.00021	-.00002	-.00000	
12	.04423	.00302	-.05110	-.00003	-.00001	-.00003	
13	.04726	.00041	-.06874	.00004	.00013	-.00002	
14	.04925	-.00181	-.07000	.00002	-.00004	.00003	
15	.04707	-.00219	-.05909	.00005	-.00017	-.00001	
16	-.10372	.01974	-.02749	-.00007	-.00009	-.00002	
17	.13727	.02899	-.03305	-.00009	.00016	-.00002	
18	.00940	.00755	-.01128	-.00013	.00001	.00005	
19	.03770	.01440	-.03875	-.00009	-.00010	-.00002	
20	.03858	.02526	-.04611	-.00016	.00006	-.00002	
21	.03750	.00840	-.06852	-.00005	-.00002	.00004	
22	.03823	.01437	-.04130	-.00009	-.00010	-.00002	
23	.03871	.01477	-.14902	-.00024	-.00002	-.00002	
24	.03917	.02522	-.05097	-.00016	.00006	-.00002	
25	.04112	.01606	-.16151	.00008	.00011	-.00002	
26	.03883	.00928	-.06689	-.00005	-.00002	.00004	
27	.04115	.01335	-.15207	.00008	-.00018	-.00000	
28	-.06655	.04805	-.03581	-.00005	.00023	-.00003	
29	.11903	.06000	-.04438	-.00008	-.00021	-.00001	
30	.01076	.06482	-.03523	-.00002	.00002	.00007	
31	.03381	.04387	-.03492	-.00010	-.00005	-.00003	
32	.03639	.05657	-.04726	-.00004	.00004	-.00001	
33	.01340	.06328	-.06425	.00013	-.00005	.00007	
34	.03466	.04387	-.03787	-.00010	-.00005	-.00003	
35	.03617	.05607	-.14444	-.00059	-.00003	-.00002	
36	.03666	.05659	-.04860	-.00004	.00004	-.00001	
37	.03805	.05563	-.24730	-.00047	.00032	.00001	
38	.01562	.06168	-.06817	.00013	-.00005	.00007	
39	.03909	.05598	-.24307	-.00047	-.00035	-.00001	
40	.02856	.05438	-.03760	-.00002	-.00002	-.00002	
41	.03711	.06150	-.04736	-.00002	-.00003	-.00001	
42	.01662	.04343	-.07201	.00002	-.00000	.00008	
43	.02094	.05747	-.03599	-.00002	.00009	-.00003	
44	.03175	.06728	-.04248	-.00007	-.00013	-.00001	
45	.03021	.05512	-.05604	-.00004	.00002	.00006	
46	.02380	.05733	-.03506	-.00002	-.00002	-.00003	
47	.02824	.06704	-.04260	-.00005	-.00004	-.00001	
48	.02826	.05559	-.05969	-.00004	.00002	.00006	

LOAD CONDITION NO. 3

3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

JOINT NUMBER	/----DEFLECTION IN INCHES----/ X	Y	Z	/----ROTATION IN RADIANS----/ X	Y	Z	/---REMARKS---/
49	.02465	.05732	-.03560	-.00002	-.00002	-.00003	
50	.02669	.05976	-.05721	-.00011	-.00002	-.00002	
51	.02869	.06694	-.04016	-.00005	-.00004	-.00002	
52	.02970	.06136	-.06805	-.00003	.00004	-.00003	
53	.03007	.05608	-.05845	-.00004	.00002	.00006	
54	.02971	.05805	-.06494	-.00005	-.00008	-.00002	
55	.02431	.05882	-.03489	-.00002	.00002	-.00003	
56	.02637	.06962	-.04315	-.00005	-.00006	-.00001	
57	.03172	.05761	-.05712	-.00004	.00002	.00006	
58	.01878	.07122	-.03731	-.00006	-.00003	-.00004	
59	.01782	.08438	-.04554	-.00005	-.00001	-.00002	
60	.02958	.07762	-.05989	-.00006	-.00002	.00003	
61	.01402	.08218	-.03802	-.00007	-.00003	-.00004	
62	.01407	.08449	-.04165	-.00012	-.00009	-.00004	
63	.01431	.09280	-.04722	-.00012	.00004	-.00004	
64	.01436	.09472	-.04624	-.00007	-.00002	-.00003	
65	.01763	.09279	-.05859	-.00016	-.00003	-.00004	
66	.02488	.09276	-.06429	.00015	.00002	-.00009	
67	.02510	.08860	-.06077	-.00006	-.00002	.00002	
68	.02533	.08450	-.05837	.00016	-.00007	-.00001	
69	.01789	.08450	-.05275	-.00016	-.00002	-.00005	
70	.02776	.08201	-.06029	-.00006	-.00003	.00002	
71	.00952	.09458	-.03828	-.00007	-.00003	-.00004	
72	.00986	.10732	-.04650	-.00007	-.00002	-.00003	
73	.00952	.09326	-.03736	-.00007	-.00003	-.00004	
74	.00986	.10824	-.04737	-.00007	-.00002	-.00003	
75	.02082	.10006	-.06105	-.00007	-.00002	.00002	
76	.02398	.09148	-.06091	-.00006	-.00002	.00002	
77	.02158	.09459	-.05996	.00001	-.00003	-.00002	
78	.02006	.10729	-.06830	-.00000	-.00002	-.00009	
79	.02158	.09388	-.05893	.00001	-.00003	-.00002	
80	.02006	.11039	-.06901	-.00000	-.00002	-.00009	
81	.00732	.09458	-.03417	-.00007	-.00003	-.00004	
82	.00833	.10732	-.04236	-.00007	-.00002	-.00003	
83	.02277	.09459	-.05983	.00000	-.00003	-.00002	
84	.02524	.10729	-.06874	-.00001	-.00002	-.00009	

LOAD CONDITION NO. 4

3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

JOINT NUMBER	DEFLECTION IN INCHES X	DEFLECTION IN INCHES Y	DEFLECTION IN INCHES Z	ROTATION IN RADIANS X	ROTATION IN RADIANS Y	ROTATION IN RADIANS Z	REMARKS
1	0.00000	0.00000	0.00000	-.00070	-.00001	.00001	
2	0.00000	0.00000	0.00000	-.00083	.00004	-.00005	
3	0.00000	0.00000	0.00000	-.00082	.00003	.00006	
4	-.00077	.05173	-.00163	-.00068	-.00000	.00002	
5	.00302	.05799	-.00235	-.00077	.00003	-.00006	
6	.00253	.05707	.00452	-.00072	.00003	.00006	
7	.01381	.05151	.07825	-.00049	.00004	.00002	
8	.02149	.05913	.08010	-.00059	-.00004	-.00006	
9	.02231	.05780	-.18377	-.00040	-.00009	.00006	
10	.01325	.05192	.06345	-.00049	.00004	.00002	
11	.01837	.06917	.06661	-.00046	-.00001	-.00001	
12	.02321	.05952	.06249	-.00059	-.00004	-.00006	
13	.02161	.07112	-.06614	-.00039	-.00007	-.00001	
14	.02396	.05856	-.16879	-.00040	-.00009	.00005	
15	.02121	.06785	-.04670	-.00035	.00000	-.00002	
16	.00368	.25054	-.00691	-.00051	.00004	.00006	
17	.01119	.28110	-.01147	-.00053	-.00001	-.00012	
18	.01696	.24588	.01476	-.00057	.00003	.00008	
19	.02478	.24961	.06499	-.00055	-.00000	.00006	
20	.01071	.28097	.06247	-.00057	-.00001	-.00012	
21	-.00306	.24756	-.15750	-.00069	-.00005	.00008	
22	.02300	.24945	.04834	-.00055	-.00000	.00006	
23	.01853	.25581	.05087	-.00043	-.00001	-.00005	
24	.01413	.28084	.04533	-.00057	-.00001	-.00011	
25	.02044	.25708	-.04177	-.00031	-.00012	.00000	
26	-.00081	.24930	-.13691	-.00069	-.00005	.00007	
27	.02032	.25470	-.03597	-.00029	.00008	.00002	
28	.01863	.45995	-.00739	-.00049	.00005	.00014	
29	.01055	.47527	-.01275	-.00043	-.00002	-.00021	
30	.02113	.50496	-.06450	-.00040	.00003	.00011	
31	.01986	.46008	.03911	-.00048	.00003	.00014	
32	.01262	.47552	.02645	-.00045	-.00002	-.00021	
33	-.01091	.50129	-.16133	-.00007	.00008	.00011	
34	.01561	.46026	.02469	-.00048	.00003	.00014	
35	.01791	.48239	.02042	-.00045	-.00004	-.00002	
36	.01895	.47569	.01300	-.00045	-.00002	-.00021	
37	.01953	.46162	-.07190	-.00039	-.00001	.00006	
38	-.00760	.49747	-.15919	-.00007	.00008	.00011	
39	.02205	.48217	-.06881	-.00042	-.00000	-.00006	
40	.02098	.53699	.01355	-.00051	.00004	.00019	
41	.01683	.54413	.00439	-.00046	-.00003	-.00025	
42	.01723	.50088	-.14629	-.00024	.00011	.00011	
43	.02939	.66063	-.00781	-.00086	.00005	.00020	
44	.01362	.65676	-.01356	-.00084	-.00002	-.00026	
45	.05207	.63249	-.03757	-.00085	.00004	.00007	
46	.03455	.66040	.02031	-.00084	.00005	.00020	
47	.00712	.65650	.01365	-.00082	-.00002	-.00025	
48	.04929	.63327	-.07144	-.00090	.00006	.00007	

S T R A N - J O I N T D E F L E C T I O N S A N D R O T A T I O N S

LOAD CONDITION NO. 4

3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

JOINT NUMBER	DEFLECTION IN INCHES X	DEFLECTION IN INCHES Y	DEFLECTION IN INCHES Z	ROTATION IN RADIANS X	ROTATION IN RADIANS Y	ROTATION IN RADIANS Z	REMARKS
49	.02852	.66039	-.00498	-.00084	.00005	.00020	
50	.02176	.64388	.00103	-.00038	-.00003	.00001	
51	.01469	.65651	-.01081	-.00082	-.00002	-.00025	
52	.02893	.64769	-.02504	.00008	-.00027	-.00010	
53	.05146	.63407	-.04445	-.00090	.00006	.00007	
54	.02863	.64047	-.02579	.00004	.00028	-.00008	
55	.03019	.71011	-.01087	-.00104	.00004	.00020	
56	.01470	.70475	-.01679	-.00103	-.00001	-.00025	
57	.05482	.68533	-.03191	-.00105	.00004	.00007	
58	.02459	1.14777	-.00927	-.00070	-.00002	.00016	
59	.02419	1.14568	-.01506	-.00069	-.00002	-.00020	
60	.04721	1.13910	-.03524	-.00081	-.00005	.00004	
61	.02178	1.21286	-.00927	-.00017	-.00002	.00017	
62	.02101	1.19685	-.01011	-.00011	-.00001	.00028	
63	.01761	1.20652	-.01272	-.00012	-.00002	.00002	
64	.01684	1.20644	-.01419	-.00016	-.00005	-.00019	
65	.02176	1.20671	-.02286	-.00010	-.00006	-.00003	
66	.03667	1.20671	-.04305	-.00012	-.00005	-.00003	
67	.03669	1.20583	-.03608	-.00016	-.00007	.00003	
68	.03668	1.19668	-.02817	-.00006	-.00006	-.00016	
69	.00224	1.19667	-.01906	-.00007	.00002	.00011	
70	.04337	1.18077	-.03557	-.00039	-.00005	.00003	
71	.01673	1.23866	-.00927	-.00013	-.00003	.00016	
72	.01578	1.23730	-.01418	-.00017	.00001	-.00019	
73	.01673	1.24458	-.00810	-.00013	-.00003	.00016	
74	.01578	1.24399	-.01390	-.00017	.00001	-.00019	
75	.02059	1.23645	-.03606	-.00018	-.00010	.00003	
76	.03292	1.21362	-.03608	-.00017	-.00008	.00003	
77	.02064	1.23864	-.02002	-.00002	-.00009	.00006	
78	.02057	1.23727	-.05245	-.00012	-.00009	-.00003	
79	.02064	1.24077	-.01674	-.00002	-.00009	.00006	
80	.02057	1.23840	-.05582	-.00012	-.00009	-.00003	
81	.02660	1.23866	-.00161	-.00013	-.00003	.00016	
82	.00463	1.23730	-.00375	-.00017	.00001	-.00019	
83	.01709	1.23864	-.02100	-.00002	-.00009	.00006	
84	.02245	1.23727	-.05947	-.00012	-.00009	-.00003	

S T R A N - J O I N T D E F L E C T I O N S A N D R O T A T I O N S

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LOAD CONDITION NO. 5

3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

JOINT NUMBER	DEFLECTION IN INCHES X	DEFLECTION IN INCHES Y	DEFLECTION IN INCHES Z	ROTATION IN RADIANS X	ROTATION IN RADIANS Y	ROTATION IN RADIANS Z	REMARKS
1	0.00000	0.00000	0.00000	.00000	.00001	-.00000	
2	0.00000	0.00000	0.00000	-.00000	-.00000	-.00000	
3	0.00000	0.00000	0.00000	.00000	-.00000	.00000	
4	.00053	-.00004	-.00006	.00000	.00001	-.00000	
5	-.00032	.00007	-.00010	-.00000	-.00000	-.00000	
6	-.00004	-.00005	-.00014	.00000	-.00000	.00000	
7	.00145	-.00008	-.00275	-.00000	-.00000	-.00000	
8	.00144	.00014	-.00262	-.00000	-.00000	-.00000	
9	.00153	-.00005	-.00398	.00000	-.00000	.00000	
10	.00146	-.00008	-.00280	-.00000	-.00000	-.00000	
11	.00146	.00003	-.00278	-.00000	-.00000	-.00000	
12	.00146	.00014	-.00291	-.00000	-.00000	-.00000	
13	.00157	.00009	-.00396	-.00000	-.00000	-.00000	
14	.00166	-.00004	-.00404	.00000	-.00000	.00000	
15	.00157	-.00002	-.00342	-.00000	-.00000	-.00000	
16	.00236	.00085	-.00059	-.00000	.00000	-.00000	
17	-.00106	.00162	-.00084	-.00001	.00000	-.00000	
18	-.00021	.00049	-.00077	-.00001	-.00000	.00001	
19	.00146	.00089	-.00274	-.00000	.00000	-.00000	
20	.00131	.00170	-.00282	-.00001	.00000	-.00000	
21	.00087	.00055	-.00422	-.00001	-.00000	.00001	
22	.00149	.00089	-.00287	-.00000	.00000	-.00000	
23	.00149	.00094	-.00289	-.00000	-.00000	-.00000	
24	.00132	.00170	-.00302	-.00001	.00000	-.00000	
25	.00149	.00098	-.00349	-.00000	-.00000	-.00000	
26	.00104	.00061	-.00393	-.00001	-.00000	.00001	
27	.00149	.00088	-.00296	.00000	.00000	.00000	
28	.00256	.00305	-.00174	-.00000	-.00000	-.00000	
29	-.00044	.00424	-.00214	-.00000	.00000	-.00000	
30	-.00117	.00582	-.00279	-.00001	-.00000	.00001	
31	.00155	.00309	-.00292	-.00000	.00000	-.00000	
32	.00142	.00432	-.00341	-.00000	-.00000	-.00000	
33	-.00167	.00569	-.00461	-.00000	-.00000	.00001	
34	.00157	.00309	-.00304	-.00000	.00000	-.00000	
35	.00157	.00458	-.00312	-.00000	-.00000	-.00000	
36	.00145	.00432	-.00346	-.00000	-.00000	-.00000	
37	.00162	.00442	-.00361	-.00000	-.00000	.00000	
38	-.00142	.00555	-.00457	-.00000	-.00000	.00001	
39	.00160	.00465	-.00370	-.00000	-.00000	-.00000	
40	.00165	.00368	-.00307	-.00000	-.00000	.00000	
41	.00112	.00430	-.00346	.00000	-.00000	-.00000	
42	-.00102	.00508	-.00468	.00001	-.00000	.00001	
43	.00100	.00454	-.00304	-.00001	-.00001	.00000	
44	.00142	.00420	-.00310	-.00000	.00001	-.00000	
45	.00014	.00338	-.00542	.00001	-.00000	.00001	
46	.00106	.00453	-.00307	-.00001	-.00001	.00000	
47	.00137	.00419	-.00351	-.00000	.00001	-.00000	
48	-.00010	.00343	-.00526	.00001	-.00000	.00001	

LOAD CONDITION NO. 5

3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

JOINT NUMBER	DEFLECTION IN INCHES X	DEFLECTION IN INCHES Y	DEFLECTION IN INCHES Z	ROTATION IN RADIANS X	ROTATION IN RADIANS Y	ROTATION IN RADIANS Z	REMARKS
49	.00104	.00453	-.00523	-.00001	-.00001	.00000	
50	.00122	.00398	-.00398	-.00001	-.00000	.00000	
51	.00139	.00419	-.00354	-.00000	.00001	-.00000	
52	.00088	.00377	-.00509	-.00001	.00000	.00000	
53	.00014	.00348	-.00556	.00001	-.00000	.00001	
54	.00088	.00417	-.00509	-.00001	-.00000	.00000	
55	.00069	.00482	-.00331	-.00001	-.00001	.00000	
56	.00170	.00426	-.00359	-.00000	.00001	-.00000	
57	.00019	.00294	-.00564	.00001	-.00000	.00001	
58	.00115	.00564	-.00415	-.00000	.00000	.00000	
59	.00109	.00403	-.00445	-.00000	-.00000	.00000	
60	-.00032	.00479	-.00648	-.00001	-.00000	.00001	
61	.00109	.00694	-.00460	-.00001	-.00001	.00000	
62	.00108	.00683	-.00764	-.00005	-.00009	.00000	
63	.00104	.00514	-.00726	-.00008	.00007	.00001	
64	.00103	.00492	-.00489	-.00001	.00000	.00000	
65	.00069	.00514	-.01313	-.00003	.00015	.00001	
66	-.00078	.00513	-.00700	.00005	-.00000	-.00000	
67	-.00077	.00600	-.00692	-.00000	-.00000	.00001	
68	-.00077	.00683	-.00636	.00003	-.00000	.00001	
69	.00084	.00683	-.01075	-.00001	-.00010	.00000	
70	-.00050	.00547	-.00666	-.00001	-.00000	.00001	
71	.00084	.00843	-.00496	-.00001	.00000	.00000	
72	.00097	.00613	-.00525	-.00001	-.00000	.00000	
73	.00084	.00651	-.00498	-.00001	.00000	.00000	
74	.00097	.00608	-.00534	-.00001	-.00000	.00000	
75	-.00115	.00692	-.00729	-.00001	-.00000	.00001	
76	-.00088	.00612	-.00702	-.00000	-.00000	.00001	
77	-.00115	.00843	-.00668	-.00001	-.00000	.00001	
78	-.00115	.00613	-.00738	-.00001	-.00000	.00000	
79	-.00115	.00880	-.00655	-.00001	-.00000	.00001	
80	-.00115	.00599	-.00739	-.00001	-.00000	.00000	
81	.00097	.00843	-.00452	-.00001	.00000	.00000	
82	.00105	.00613	-.00491	-.00001	-.00000	.00000	
83	-.00176	.00843	-.00699	-.00001	-.00000	.00001	
84	-.00139	.00613	-.00784	-.00001	-.00000	.00000	

LOAD CONDITION NO. 6

3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

JOINT NUMBER	DEFLECTION IN INCHES X	DEFLECTION IN INCHES Y	DEFLECTION IN INCHES Z	ROTATION IN RADIANS X	ROTATION IN RADIANS Y	ROTATION IN RADIANS Z	REMARKS
1	0.00000	0.00000	0.00000	.00000	.00004	-.00000	
2	0.00000	0.00000	0.00000	-.00001	-.00002	-.00000	
3	0.00000	0.00000	0.00000	.00000	-.00001	.00002	
4	.00295	-.00024	-.00033	.00000	.00004	-.00000	
5	-.00167	.00038	-.00054	-.00001	-.00002	-.00000	
6	-.00017	-.00028	-.00077	.00001	-.00001	.00002	
7	.00911	-.00049	-.01476	-.00001	-.00000	-.00000	
8	.00908	.00082	-.01552	-.00002	-.00000	-.00000	
9	.00964	-.00026	-.02162	.00001	-.00001	.00002	
10	.00918	-.00050	-.01500	-.00001	-.00000	-.00000	
11	.00918	.00017	-.01509	-.00002	-.00000	-.00000	
12	.00917	.00082	-.01599	-.00002	-.00000	-.00000	
13	.00982	.00049	-.02157	-.00001	-.00000	-.00001	
14	.01036	-.00024	-.02193	.00001	-.00001	.00002	
15	.00980	-.00014	-.01846	-.00001	-.00000	-.00000	
16	.01326	.00461	-.00315	-.00003	.00001	-.00000	
17	-.00541	.00879	-.00461	-.00004	.00000	-.00000	
18	-.00074	.00267	-.00417	-.00005	-.00001	.00003	
19	.00898	.00477	-.01472	-.00002	-.00000	-.00000	
20	.00815	.00929	-.01545	-.00004	.00000	-.00000	
21	.00584	.00299	-.02291	-.00005	-.00002	.00003	
22	.00912	.00476	-.01545	-.00002	-.00000	-.00000	
23	.00866	.00509	-.01568	-.00002	-.00000	-.00001	
24	.00820	.00928	-.01656	-.00004	.00000	-.00000	
25	.00917	.00534	-.01902	-.00001	-.00002	-.00001	
26	.00675	.00333	-.02135	-.00005	-.00002	.00003	
27	.00920	.00478	-.01598	.00000	.00000	.00000	
28	.01455	.01651	-.00933	-.00003	-.00001	-.00000	
29	-.00182	.02304	-.01170	-.00002	.00002	-.00000	
30	-.00564	.03158	-.01512	-.00003	-.00001	.00004	
31	.00928	.01674	-.01571	-.00002	.00000	-.00000	
32	.00858	.02349	-.01866	-.00001	-.00001	-.00000	
33	-.00815	.03088	-.02566	-.00001	-.00001	.00005	
34	.00937	.01675	-.01638	-.00002	.00000	-.00000	
35	.00938	.02488	-.01595	-.00002	-.00001	-.00001	
36	.00870	.02351	-.01892	-.00001	-.00001	-.00000	
37	.00970	.02404	-.02091	-.00002	-.00000	.00001	
38	-.00670	.03016	-.02082	-.00001	-.00001	.00005	
39	.01068	.02522	-.02005	-.00002	-.00000	-.00000	
40	.00973	.01997	-.01654	-.00002	-.00000	-.00000	
41	.00683	.02336	-.01888	.00001	-.00001	-.00000	
42	-.00471	.02761	-.02539	.00003	-.00000	.00005	
43	.00609	.02465	-.01661	-.00003	-.00003	.00000	
44	.00835	.02294	-.01855	-.00001	.00003	-.00000	
45	.00147	.01835	-.02043	.00005	-.00000	.00004	
46	.00643	.02461	-.01655	-.00003	-.00003	.00000	
47	.00812	.02280	-.01915	-.00001	.00003	-.00000	
48	.00018	.01861	-.02854	.00006	-.00000	.00004	

LOAD CONDITION NO. 6

3-PILE ACHR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

JOINT NUMBER	DEFLECTION IN INCHES X	DEFLECTION IN INCHES Y	DEFLECTION IN INCHES Z	ROTATION IN RADIANS X	ROTATION IN RADIANS Y	ROTATION IN RADIANS Z	REMARKS
49	.00632	.02458	-.01742	-.00003	-.00005	.00000	
50	.00728	.02159	-.02161	-.00004	-.00001	.00001	
51	.00822	.02276	-.01934	-.00001	.00003	-.00000	
52	.00546	.02048	-.02773	-.00004	.00002	.00001	
53	.00148	.01889	-.03020	.00006	-.00000	.00004	
54	.00546	.02264	-.02763	-.00005	-.00002	.00002	
55	.00437	.02616	-.01783	-.00003	-.00003	.00000	
56	.00491	.02315	-.01961	-.00001	.00003	-.00000	
57	.00170	.01595	-.03066	.00005	-.00000	.00004	
58	.00675	.03047	-.02245	-.00002	.00002	.00001	
59	.00628	.02196	-.02424	-.00001	-.00002	.00000	
60	-.00113	.02608	-.03521	-.00006	-.00001	.00004	
61	.00610	.03743	-.02466	-.00006	-.00004	.00001	
62	.00605	.03685	-.04497	-.00029	-.00057	.00002	
63	.00586	.02806	-.04231	-.00054	.00046	.00003	
64	.00582	.02700	-.02667	-.00005	.00002	.00001	
65	.00412	.02806	-.08041	-.00018	.00085	.00003	
66	-.00360	.02804	-.03805	.00032	-.00000	-.00003	
67	-.00354	.03254	-.03761	.00000	-.00001	.00004	
68	-.00351	.03685	-.03472	.00020	-.00003	.00008	
69	.00483	.03685	-.06473	-.00007	-.00067	.00002	
70	-.00209	.02988	-.03617	-.00004	-.00001	.00004	
71	.00441	.04538	-.02672	-.00004	.00000	.00001	
72	.00522	.03394	-.02853	-.00003	-.00002	.00001	
73	.00441	.04577	-.02686	-.00004	.00000	.00001	
74	.00522	.03370	-.02914	-.00003	-.00002	.00001	
75	-.00550	.03729	-.03946	-.00004	-.00001	.00004	
76	-.00412	.03299	-.03810	-.00002	-.00001	.00004	
77	-.00549	.04537	-.03633	-.00003	-.00002	.00005	
78	-.00551	.03393	-.03996	-.00004	-.00000	.00001	
79	-.00549	.04734	-.03563	-.00003	-.00002	.00005	
80	-.00551	.03341	-.04002	-.00004	-.00000	.00001	
81	.00506	.04538	-.02445	-.00004	.00000	.00001	
82	.00563	.03394	-.02665	-.00003	-.00002	.00001	
83	-.00877	.04537	-.03811	-.00003	-.00002	.00005	
84	-.00638	.03393	-.04247	-.00004	-.00000	.00001	

STRAN - JOINT DEFLECTIONS AND ROTATIONS

LOAD CONDITION NO. 7

3-PILE ACMH STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

JOINT NUMBER	DEFLECTION IN INCHES X	DEFLECTION IN INCHES Y	DEFLECTION IN INCHES Z	ROTATION IN RADIANS X	ROTATION IN RADIANS Y	ROTATION IN RADIANS Z	REMARKS
1	0.00000	0.00000	0.00000	.00507	.00033	.00098	
2	0.00000	0.00000	0.00000	.00537	.00059	-.00098	
3	0.00000	0.00000	0.00000	.00583	.00044	-.00044	
4	.02030	-.36310	.01415	.00459	.00031	.00092	
5	.04612	-.38492	.00713	.00490	.00061	-.00092	
6	.02668	-.40397	-.00012	.00504	.00044	-.00044	
7	.74666	-.39672	-.38727	.00308	-.00059	.00092	
8	.60956	-.36465	-.62041	.00355	-.00008	-.00092	
9	.72537	-.40958	.95938	.00262	.00012	-.00044	
10	.71898	-.40020	-.29489	.00308	-.00059	.00092	
11	.67691	-.51277	-.43409	.00361	-.00029	-.00003	
12	.65730	-.36799	-.51402	.00355	-.00008	-.00092	
13	.70008	-.49063	.25498	.00279	.00054	-.00016	
14	.71234	-.41542	.88065	.00262	.00012	-.00043	
15	.68646	-.51096	.26005	.00261	-.00085	.00007	
16	.10684	-1.58919	.05930	.00262	.00025	.00071	
17	.29000	-1.70440	.01232	.00268	.00052	-.00063	
18	.15194	-1.54224	-.12263	.00290	.00036	-.00056	
19	.54078	-1.60449	-.31257	.00302	-.00032	.00072	
20	.56958	-1.69339	-.48633	.00304	-.00028	-.00064	
21	.72616	-1.55042	.80560	.00383	-.00003	-.00056	
22	.51885	-1.60347	-.22191	.00302	-.00032	.00074	
23	.55398	-1.60562	-.42356	.00214	-.00029	.00014	
24	.58881	-1.69224	-.39516	.00304	-.00028	-.00065	
25	.57804	-1.58729	.02405	.00175	.00047	-.00062	
26	.70922	-1.55894	.69065	.00383	-.00063	-.00057	
27	.56990	-1.60950	.08990	.00162	-.00094	-.00027	
28	.20035	-2.67987	.06846	.00217	.00026	.00035	
29	.40111	-2.71943	-.01410	.00188	.00001	-.00034	
30	.29020	-2.88521	.28609	.00205	.00012	-.00056	
31	.45628	-2.69166	-.15050	.00179	-.00040	.00035	
32	.42151	-2.71966	-.24161	.00171	-.00038	-.00036	
33	.64125	-2.86648	.79783	.00034	-.00087	-.00057	
34	.44563	-2.69286	-.09668	.00179	-.00040	.00036	
35	.43582	-2.78344	-.23463	.00147	-.00012	.00004	
36	.43240	-2.72077	-.18985	.00171	-.00038	-.00037	
37	.45167	-2.76246	.06455	.00159	-.00009	-.00051	
38	.62425	-2.84698	.78775	.00034	-.00087	-.00057	
39	.43473	-2.79050	.12852	.00179	-.00048	.00026	
40	.36438	-3.00605	-.04807	.00212	-.00046	.00021	
41	.37568	-3.00802	-.13590	.00190	-.00036	-.00015	
42	.42022	-2.85694	.72038	.00122	-.00100	-.00068	
43	.24378	-3.69035	.06548	.00065	-.00023	.00029	
44	.32102	-3.64243	-.01896	.00451	-.00027	-.00021	
45	.14512	-3.56420	.13590	.00477	-.00034	-.00051	
46	.26239	-3.69070	-.09326	.00470	-.00045	.00030	
47	.31013	-3.64264	-.17262	.00454	-.00024	-.00022	
48	.16644	-3.56858	.32275	.00505	-.00058	-.00052	

S T R A N - J O I N T D E F L E C T I O N S A N D R O T A T I O N S

LOAD CONDITION NO. 7

3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

JOINT NUMBER	DEFLECTION IN INCHES X	DEFLECTION IN INCHES Y	DEFLECTION IN INCHES Z	ROTATION IN RADIANS X	ROTATION IN RADIANS Y	ROTATION IN RADIANS Z	REMARKS
49	.25311	-3.69025	.04786	.00470	-.00045	.00032	
50	.28411	-3.61890	-.05515	.00197	-.00019	-.00014	
51	.31679	-3.64240	-.03655	.00454	-.00024	-.00023	
52	.26128	-3.62655	.03769	-.00057	.00127	.00058	
53	.15091	-3.57314	.17129	.00505	-.00058	-.00052	
54	.25626	-3.60212	.09797	-.00038	-.00194	.00025	
55	.22841	-3.97584	.08020	.00571	-.00033	.00036	
56	.30549	-3.92052	.00016	.00562	-.00030	-.00028	
57	.11966	-3.86462	.10147	.00596	-.00041	-.00050	
58	.16517	-6.12544	.06834	.00377	-.00028	.00133	
59	.15193	-6.09347	-.01259	.00377	-.00020	-.00134	
60	.05506	-6.11297	.11592	.00380	-.00014	-.00019	
61	.10780	-6.47688	.06719	.00085	-.00030	.00148	
62	.11204	-6.46479	.04634	.00043	-.00044	-.00050	
63	.13111	-6.51578	-.01359	.00046	-.00006	-.00118	
64	.13537	-6.43790	-.01853	.00091	-.00015	-.00140	
65	.23886	-6.51622	.02418	.00032	.00022	-.00041	
66	.02773	-6.51637	.09950	.00050	-.00015	.00089	
67	.02786	-6.43377	.11943	.00078	-.00008	-.00026	
68	.02810	-6.46341	.13322	.00038	-.00018	.00023	
69	.08644	-6.46318	.08016	.00025	-.00066	.00000	
70	.04314	-6.31181	.11728	.00187	-.00018	-.00022	
71	.06823	-6.59909	.06655	.00058	-.00018	.00146	
72	.07520	-6.60559	-.01918	.00093	-.00042	-.00138	
73	.06823	-6.54640	.07509	.00058	-.00018	.00146	
74	.07520	-6.55574	-.03437	.00093	-.00042	-.00138	
75	.03353	-6.59109	.11880	.00092	.00008	-.00025	
76	.02605	-6.47283	.11920	.00084	-.00000	-.00025	
77	.03404	-6.59910	.10707	.00010	.00004	-.00036	
78	.03305	-6.60543	.12697	.00044	.00007	.00047	
79	.03404	-6.61204	.10567	.00010	.00004	-.00036	
80	.03305	-6.62251	.12941	.00044	.00007	.00047	
81	.15603	-6.59909	.03141	.00059	-.00018	.00146	
82	-.00788	-6.60559	-.07516	.00093	-.00042	-.00138	
83	.05560	-6.59910	.11255	.00009	.00004	-.00036	
84	.00459	-6.60543	.15305	.00043	.00007	.00047	

S T R A N - J O I N T   D E F L E C T I O N S   A N D   R O T A T I O N S

LOAD CONDITION NO. 8

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3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

JOINT NUMBER	DEFLECTION IN INCHES X	DEFLECTION IN INCHES Y	DEFLECTION IN INCHES Z	ROTATION IN RADIANS X	ROTATION IN RADIANS Y	ROTATION IN RADIANS Z	REMARKS
1	0.00000	0.00000	0.00000	-.00511	-.00105	-.00090	
2	0.00000	0.00000	0.00000	-.00545	-.00005	.00092	
3	0.00000	0.00000	0.00000	-.00578	-.00061	.00059	
4	-.07201	.36560	-.02569	-.00465	-.00103	-.00084	
5	-.00734	.38901	-.01721	-.00498	-.00007	.00086	
6	-.03774	.40087	.03453	-.00498	-.00061	.00059	
7	-.89445	.40315	.25220	-.00316	.00066	-.00085	
8	-.76299	.36065	.53455	-.00361	.00016	.00086	
9	-.89004	.40663	-1.12627	-.00261	-.00011	.00059	
10	-.86905	.40657	.15746	-.00316	.00066	-.00085	
11	-.82774	.51150	.31684	-.00394	.00036	.00006	
12	-.78892	.36391	.42613	-.00361	.00016	.00086	
13	-.85496	.48720	-.40133	-.00275	-.00021	.00014	
14	-.87256	.41264	-1.04803	-.00261	-.00011	.00058	
15	-.84190	.51304	-.41930	-.00257	.00065	-.00012	
16	-.37483	1.63872	-.12995	-.00281	-.00056	-.00066	
17	-.10065	1.76711	-.07340	-.00290	-.00036	.00061	
18	-.21688	1.56282	.09511	-.00325	-.00052	.00074	
19	-.66439	1.64852	.18461	-.00324	.00023	-.00068	
20	-.69371	1.74597	.46561	-.00342	.00050	.00061	
21	-.87637	1.57310	-.97071	-.00399	.00004	.00075	
22	-.64374	1.64743	.08748	-.00324	.00023	-.00070	
23	-.67811	1.64174	.10443	-.00266	.00036	-.00015	
24	-.71224	1.74303	.30114	-.00342	.00050	.00062	
25	-.70562	1.62142	-.35825	-.00161	-.00017	.00002	
26	-.85381	1.58381	-.85089	-.00390	.00004	.00076	
27	-.69759	1.64794	-.43117	-.00106	.00069	.00028	
28	-.43905	2.80489	-.17101	-.00232	.00012	-.00034	
29	-.28973	2.85903	-.07262	-.00200	-.00047	.00034	
30	-.41936	3.05653	-.37532	-.00213	-.00020	.00083	
31	-.54825	2.81060	.03421	-.00202	.00042	-.00035	
32	-.51056	2.85094	.14607	-.00181	.01055	.00035	
33	-.62843	3.03385	-.95717	-.00010	.00085	.00083	
34	-.53776	2.81180	-.02688	-.00292	.00042	-.00035	
35	-.52486	2.92745	-.07725	-.00266	.00016	-.00006	
36	-.52137	2.85210	.09181	-.00181	.00055	.00037	
37	-.54634	2.89879	-.57391	-.00253	.00082	.00062	
38	-.60338	3.01022	-.95451	-.00010	.00085	.00084	
39	-.52581	2.94056	-.65275	-.00274	-.00012	-.00026	
40	-.44949	3.14846	-.07196	-.00218	.00052	-.00018	
41	-.44736	3.15006	.03755	-.00193	.00040	.00015	
42	-.57210	2.98228	-.89464	-.00119	.00110	.00098	
43	-.32813	3.84092	-.17517	-.00471	.00142	-.00027	
44	-.37966	3.79307	-.07204	-.00456	.00009	.00022	
45	-.23241	3.69516	-.28709	-.00474	.00039	.00076	
46	-.33937	3.84089	-.01918	-.00476	.00044	-.00028	
47	-.37583	3.79277	.07931	-.00460	.00028	.00023	
48	-.26248	3.70086	-.47892	-.00502	.00068	.00077	

S T R A N - J O I N T D E F L E C T I O N S A N D R O T A T I O N S

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LOAD CONDITION NO. 8

3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

JOINT NUMBER	DEFLECTION IN INCHES X	DEFLECTION IN INCHES Y	DEFLECTION IN INCHES Z	ROTATION IN RADIANS X	ROTATION IN RADIANS Y	ROTATION IN RADIANS Z	REMARKS
49	-.33073	3.84038	-.16188	-.00476	.00044	-.00029	
50	-.35586	3.76247	-.08885	-.00222	.00026	.00015	
51	-.38278	3.79229	-.05881	-.00465	.00028	.00024	
52	-.33702	3.76756	-.20179	.00043	-.00105	-.00058	
53	-.23936	3.70679	-.32828	-.00502	.00068	.00077	
54	-.33202	3.74818	-.27397	.00028	.00184	-.00024	
55	-.30578	4.12901	-.19267	-.00577	.00039	-.00034	
56	-.37011	4.07383	-.09419	-.00567	.00027	.00029	
57	-.20161	3.99547	-.25676	-.00593	.00047	.00074	
58	-.22306	6.29517	-.19199	-.00389	.00033	-.00130	
59	-.21254	6.24633	-.09275	-.00383	.00026	.00135	
60	-.13110	6.27349	-.28270	-.00393	.00014	.00036	
61	-.15750	6.67702	-.19555	-.00106	.00030	-.00145	
62	-.16175	6.65943	-.20249	-.00105	-.00039	.00064	
63	-.18085	6.68740	-.12469	-.00141	.00085	.00111	
64	-.18512	6.61290	-.09164	-.00110	.00024	.00141	
65	-.28423	6.68776	-.23351	-.00083	.00097	.00042	
66	-.10227	6.68761	-.26888	.00004	.00026	-.00118	
67	-.10187	6.61973	-.29119	-.00090	.00010	.00040	
68	-.10159	6.65775	-.30650	.00005	.00010	.00022	
69	-.14527	6.65778	-.28356	-.00062	-.00019	.00008	
70	-.11895	6.48225	-.28615	-.00201	.00018	.00038	
71	-.11044	6.83496	-.19801	-.00078	.00024	-.00144	
72	-.11568	6.81132	-.09409	-.00110	.00046	.00139	
73	-.11044	6.78315	-.20660	-.00078	.00020	-.00144	
74	-.11568	6.76117	-.07765	-.00110	.00046	.00139	
75	-.10206	6.80710	-.29570	-.00111	-.00005	.00039	
76	-.09873	6.66539	-.29194	-.00100	.00003	.00040	
77	-.10103	6.83495	-.29182	-.00011	-.00003	.00053	
78	-.10309	6.81110	-.30067	-.00051	-.00001	-.00049	
79	-.10103	6.85413	-.29082	-.00011	-.00003	.00053	
80	-.10309	6.82857	-.30119	-.00051	-.00002	-.00049	
81	-.19678	6.83496	-.15148	-.00077	.00024	-.00144	
82	-.03209	6.81132	-.02852	-.00109	.00046	.00139	
83	-.13298	6.83495	-.29893	-.00012	-.00003	.00053	
84	-.07398	6.81110	-.33167	-.00052	-.00001	-.00049	

STRAN - REACTION FORCES AND MOMENTS

LOAD CONDITION NO. 1

3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

JOINT NUMBER	FORCE IN KIPS F-X	FORCE IN KIPS F-Y	FORCE IN KIPS F-Z	MOMENT IN IN-KIPS M-X	MOMENT IN IN-KIPS M-Y	MOMENT IN IN-KIPS M-Z	REMARKS
1	91.6651	-174.3208	-671.7508	0.0000	0.0000	0.0000	
2	-89.5588	-169.8297	-665.6521	0.0000	0.0000	0.0000	
3	.7353	-412.0781	1332.9697	0.0000	0.0000	0.0000	
TOTAL	2.8417	-756.2286	-4.4332	0.0000	0.0000	0.0000	

S T R A [illegible] - R E A C T I O N   F O R C E S   A N D   M O M E N T S

LOAD CONDITION NO. 2

3-PILE ACDR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHER[illegible]

JOINT NUMBER	FORCE IN KIPS F-X	F-Y	F-Z	MOMENT IN IN-KIPS M-X	M-Y	M-Z	REMARKS
1	-91.3341	173.4954	670.4799	0.0000	0.0000	0.0000	
2	90.2140	170.1944	669.0216	0.0000	0.0000	0.0000	
3	-.5770	412.0387	-1338.3127	0.0000	0.0000	0.0000	
TOTAL	-1.6971	755.7285	1.1887	0.0000	0.0000	0.0000	

S T R A N - R E A C T I O N F O R C E S A N D M O M E N T S

LOAD CONDITION NO. 3

3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

JOINT NUMBER	FORCE IN KIPS F-X	F-Y	F-Z	MOMENT IN IN-KIPS M-X	M-Y	M-Z	REMARKS
1	-16.8822	12.3568	139.7968	0.0000	0.0000	0.0000	
2	16.8817	12.3559	140.4115	0.0000	0.0000	0.0000	
3	.0005	-24.7128	155.6416	0.0000	0.0000	0.0000	
TOTAL	-.0000	.0000	435.8499	0.0000	0.0000	0.0000	

S T R A N - R E A C T I O N F O R C E S A N D M O M E N T S

LOAD CONDITION NO. 4

3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

JOINT NUMBER	FORCE IN KIPS F-X	F-Y	F-Z	MOMENT IN IN-KIPS M-X	M-Y	M-Z	REMARKS
1	20.2022	-27.1789	-145.9515	0.0000	0.0000	0.0000	
2	-20.2074	-27.1879	-145.9515	0.0000	0.0000	0.0000	
3	.0052	-75.2332	291.9031	0.0000	0.0000	0.0000	
TOTAL	.0000	-129.6000	-.0000	0.0000	0.0000	0.0000	

STRAP - REACTION FORCES AND MOMENTS

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LOAD CONDITION NO. 5

3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

JOINT NUMBER	FORCE IN KIPS F-X	F-Y	F-Z	MOMENT IN IN-KIPS M-X	M-Y	M-Z	REMARKS
1	-1.4087	.8283	9.8075	0.0000	0.0000	0.0000	
2	1.4083	.8276	9.8231	0.0000	0.0000	0.0000	
3	.0004	-1.6559	9.8141	0.0000	0.0000	0.0000	
TOTAL	-.0000	.0000	29.4447	0.0000	0.0000	0.0000	

S T R A N - R E A C T I O N   F O R C E S   A N D   M O M E N T S

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LOAD CONDITION NO. 6

3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

JOINT NUMBER	FORCE IN KIPS F-X	F-Y	F-Z	MOMENT IN IN-KIPS M-X	M-Y	M-Z	REMARKS
1	-7.6499	4.4972	53.2513	0.0000	0.0000	0.0000	
2	7.6485	4.4948	53.3550	0.0000	0.0000	0.0000	
3	.0014	-8.9920	53.2917	0.0000	0.0000	0.0000	
TOTAL	-.0000	.0000	159.8980	0.0000	0.0000	0.0000	

S T R A W - R E A C T I O N F O R C E S A N D M O M E N T S

LOAD CONDITION NO. 7

3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

JOINT NUMBER	FORCE IN KIPS F-X	F-Y	F-Z	MOMENT IN IN-KIPS M-X	M-Y	M-Z	REMARKS
1	-129.8272	213.8594	966.0357	0.0000	0.0000	0.0000	
2	128.7115	210.5659	965.2077	0.0000	0.0000	0.0000	
3	-.5813	460.9032	-1464.7601	0.0000	0.0000	0.0000	
TOTAL	-1.6971	885.3285	466.4833	0.0000	0.0000	0.0000	

STRAN - REACTION FORCES AND MOMENTS

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LOAD CONDITION NO. 8

3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

JOINT NUMBER	F-X	F-Y	F-Z	M-X	M-Y	M-Z	REMARKS
	/----------FORCE IN KIPS	----------/		/----------MOMENT IN IN-KIPS	----------/		/---REMARKS---/
1	85.9265	-183.8174	-614.8068	0.0000	0.0000	0.0000	
2	-83.8277	-179.3392	-608.0140	0.0000	0.0000	0.0000	
3	.7428	-522.6720	1843.6201	0.0000	0.0000	0.0000	
TOTAL	2.8417	-885.8286	620.7594	0.0000	0.0000	0.0000	

S T R A N   G R O U P   S U M M A R Y   R E P O R T

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3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

MEMBER GROUP I.D.	FIRST MEMBER NO.	FIRST MAX. U. CK	FIRST LD. CN.	SECOND MEMBER NO.	SECOND MAX. U. CK	SECOND LD. CN.	THIRD MEMBER NO.	THIRD MAX. U. CK	THIRD LD. CN.	TOTAL	WITH UNITY CK GT 1.33	WITH UNITY CK GT 1.00	WITH UNITY CK LT .50
P10	3- 6	1.00	8	6- 18	.99	8	1- 4	.57	7	6	0	1	0
WBN	30- 33	1.06	8	33- 38	1.06	8	21- 26	.46	8	24	0	2	22
BR2	25- 26	.80	8	24- 25	.65	7	15- 10	.49	7	12	0	0	10
JL1	26- 38	1.45	8	24- 36	.49	7	22- 34	.36	7	6	1	1	5
BR4	15- 11	.24	7	11- 13	.22	7	13- 15	.19	8	6	0	0	6
BR3	53- 54	1.36	8	54- 49	1.24	7	13- 26	.90	7	12	1	2	4
P20	30- 45	1.54	8	45- 57	1.45	8	18- 30	1.19	8	9	2	3	2
BR1	34- 53	1.19	7	26- 34	.98	8	38- 51	.94	8	6	0	1	2
BR5	60- 64	1.18	8	58- 67	1.13	7	59- 60	.85	8	15	0	2	7
JL2	42- 53	1.25	8	38- 42	1.25	8	53- 57	1.22	8	9	0	3	2
BR6	37- 39	.19	8	39- 35	.15	8	35- 37	.15	8	5	0	0	5
STL	57- 60	.93	8	60- 70	.85	8	56- 59	.77	7	11	0	0	4
W18	67- 69	101.31	8	65- 67	.99	7	61- 62	.96	8	20	1	1	15
W08	69- 62	.22	8	63- 65	.21	8	66- 67	.14	7	6	0	0	6
BR7	70- 66	.30	2	70- 68	.25	2				2	0	0	2
W06	71- 75	1.46	8	72- 75	.44	7				2	1	1	1

TOTAL MEMBERS 151 6 17 93

S T R A N   U N I T Y   C H E C K   S U M M A R Y   R E P O R T

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3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

T H R E E   H I G H E S T   U N I T Y   C H E C K S   G.T. 1.00

MEMBER NUMBER	MEMBER GROUP ID	/---FIRST HIGHEST---/ UNITY CHECK	LD. CN.	/---SECOND HIGHEST--/ UNITY CHECK	LD. CN.	/---THIRD HIGHEST---/ UNITY CHECK	LD. CN.
67- 69	W18	(4A) 1.31	8	1.07	1	.38	7
30- 45	P20	1.54	8	1.35	7	1.17	1
71- 75	W06	1.46	8	.88	1	.24	7
45- 57	P20	1.45	8	1.32	7	1.14	2
26- 38	JL1	1.45	8	1.20	7	1.09	2
53- 54	BR3	1.36	8	1.27	7	1.07	2
42- 53	JL2	1.25	8	1.12	7	.98	2
38- 42	JL2	1.25	8	1.12	7	.98	2
54- 49	BR3	1.24	7	1.17	8	.98	2
53- 57	JL2	1.22	8	1.10	7	.95	2
34- 53	BR1	1.19	7	1.03	8	1.00	2
18- 30	P20	1.19	8	.98	7	.87	1
60- 64	BR5	1.18	8	1.02	1	.97	7
58- 67	BR5	1.13	7	1.01	2	.93	8
30- 33	WBN	1.06	8	.87	7	.78	2
33- 38	WBN	1.06	8	.88	7	.78	2
3- 6	P10	1.00	8	.90	7	.80	1

S T R A S   M E M B E R   S T R E S S   R E P O R T   N O .   1

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3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

MEMBER NO.	GROUP ID	MAXIMUM COMBINED UNITY CK	UNITY CHECK COMPONENT VALUES AXIAL	Y-AXIS	Z-AXIS	LOAD COMB NO.	DIST FROM END(FT)	CONTROLLING MEMBER ACTIONS FORCE FX KIPS	TORSION MX IN-KIPS	MOMENT MY IN-KIPS	MOMENT MZ IN-KIPS	NEXT TWO HIGH CASES COMBINED UNITY CK	LD CN	COMBINED UNITY CK	LD CN
1-	4 P10-01	.565	.242	.081	.242	7	6.1	-983.59	-.00	5392.70	-9294.67	.466	8	.450	1
2-	5 P10-01	.558	.242	.078	.238	7	6.1	-982.41	.00	5219.00	9121.31	.455	8	.441	2
3-	6 P10-01	1.001	.467	.534	.000	8	6.1	-1897.41	-.00	17739.53	54.08	.896	7	.799	1
4-	7 WBN-01	.156	.156	.000	.000	7	2.4	168.53	0.00	5.12	59.79	.154	8	.137	1
4-	16 P10-01	.563	.239	.091	.233	7	0.0	-972.78	106.36	5700.52	-9117.47	.464	8	.448	1
5-	8 WBN-01	.150	.149	.000	.000	7	2.4	161.44	0.00	5.12	-103.39	.146	8	.131	1
5-	17 P10-01	.556	.239	.087	.230	7	0.0	-972.07	-60.66	5521.13	8957.22	.453	8	.439	2
6-	9 WBN-01	.270	.269	.000	.001	8	2.4	290.17	0.00	5.11	-223.34	.262	7	.232	1
6-	18 P10-01	.990	.456	.534	.000	8	0.0	-1853.41	219.41	17739.53	90.84	.885	7	.790	1
7-	10 WBN-01	.157	.156	.000	.000	7	2.5	-168.38	-.21	11.09	-150.69	.154	8	.137	1
8-	12 WBN-01	.150	.150	.000	.000	7	2.5	-161.30	.21	11.09	98.23	.146	8	.131	2
9-	14 WBN-01	.270	.269	.000	.001	8	2.5	-290.17	-.00	11.09	-223.34	.262	7	.232	1
10-	11 BR2-01	.235	.179	.009	.046	8	29.0	-94.63	54.66	65.93	-146.11	.235	7	.219	1
15-	10 BR2-01	.490	.346	.133	.011	7	29.0	-162.52	.80	382.14	111.70	.453	8	.410	2
10-	22 JL1-01	.107	.096	.089	.012	8	32.4	7.56	88.42	1244.45	-454.49	.070	2	.067	1
11-	12 BR2-01	.218	.168	.032	.018	8	29.0	-88.94	-22.64	114.26	-86.62	.218	7	.211	1
11-	13 BR4-01	.218	.029	.171	.018	7	0.0	10.21	28.10	206.60	66.73	.192	2	.189	8
15-	11 BR4-01	.244	.025	.199	.020	7	29.0	8.55	-24.36	239.78	76.76	.213	2	.209	1
11-	22 BR3-01	.200	.014	.005	.181	8	40.3	7.56	-6.50	57.66	362.02	.187	7	.187	2
11-	24 BR3-01	.182	.019	.005	.158	7	40.3	9.90	-4.95	55.06	317.36	.178	2	.173	8
12-	13 BR2-01	.461	.325	.131	.005	7	0.0	-171.43	11.16	371.19	69.60	.381	2	.370	8
12-	24 JL1-01	.072	.006	.065	.001	8	32.4	8.14	-131.56	852.30	88.65	.040	3	.032	2
13-	14 BR2-01	.478	.318	.056	.104	8	29.0	-168.09	11.39	262.53	359.72	.403	7	.401	1
13-	15 BR4-01	.193	.050	.050	.092	8	29.0	17.47	4.62	96.68	131.91	.191	2	.190	7
13-	24 BR3-01	.778	.625	.102	.051	8	0.0	-258.56	5.25	-203.46	-143.85	.708	1	.685	7
13-	26 BR3-01	.905	.615	.133	.157	7	40.3	-254.37	-9.62	-322.45	-350.08	.836	8	.824	2
14-	15 BR2-01	.405	.311	.093	.001	8	0.0	-164.09	-44.25	260.17	31.71	.342	7	.340	1
14-	26 JL1-01	.249	.008	.238	.005	8	32.4	10.70	107.72	-3134.36	327.19	.230	7	.194	1
15-	22 BR3-01	.806	.635	.169	.002	8	40.3	-262.57	-13.74	-275.48	33.23	.746	1	.720	7
15-	26 BR3-01	.876	.635	.131	.110	7	40.3	-262.45	-19.19	-288.41	263.88	.803	8	.799	2
16-	19 WBN-01	.051	.049	.000	.002	8	2.4	52.91	0.00	5.12	-460.25	.047	7	.042	1
16-	28 P20-01	.493	.350	.036	.107	7	32.4	-945.83	-359.76	2002.40	-3441.91	.399	8	.377	2
17-	20 WBN-01	.043	.042	.000	.001	8	2.4	45.35	0.00	5.12	216.36	.039	7	.035	2
17-	29 P20-01	.490	.349	.011	.129	7	32.4	-944.54	159.49	1087.33	3739.62	.394	8	.373	2
18-	21 WBN-01	.480	.479	.000	.001	8	2.4	517.67	0.00	5.11	166.11	.383	7	.347	2
18-	30 P20-01	1.188	.677	.510	.001	8	32.6	-1830.41	174.48	-13512.01	-601.91	.977	7	.872	1
19-	22 WBN-01	.051	.049	.000	.002	8	2.5	-52.87	-.19	11.09	-519.74	.047	7	.042	1
20-	24 WBN-01	.043	.042	.000	.001	8	2.5	-45.32	.19	11.09	267.34	.039	7	.035	2
21-	26 WBN-01	.481	.480	.000	.001	8	2.5	-517.67	-.00	11.09	166.11	.382	7	.346	2
22-	23 BR2-01	.324	.161	.037	.126	7	24.4	-95.72	73.47	-196.85	362.57	.308	8	.288	2
27-	22 BR2-01	.401	.141	.218	.042	7	24.4	-85.76	13.56	601.98	265.79	.283	2	.276	1
22-	34 JL1-01	.365	.156	.153	.055	7	32.4	200.16	-150.95	2337.11	-1405.59	.296	8	.290	1
22-	36 HR1-01	.346	.104	.036	.205	8	0.0	-66.16	-32.70	362.34	-860.28	.302	7	.298	1
23-	24 BR2-01	.342	.160	.035	.149	7	0.0	-94.92	-74.85	-194.66	416.74	.332	8	.305	2
23-	25 BR4-01	.113	.020	.022	.071	8	24.4	-6.11	-29.03	52.28	-93.82	.101	1	.100	2
27-	23 BR4-01	.110	.021	.045	.044	7	24.4	7.32	-24.12	72.56	71.69	.102	8	.097	1
24-	25 BR2-01	.655	.392	.197	.066	7	0.0	233.05	.50	574.26	331.75	.651	8	.532	1
24-	36 JL1-01	.490	.333	.097	.060	7	32.4	446.61	53.38	1607.52	1263.73	.460	8	.395	1

3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

MEMBER NO.	GROUP ID	MAXIMUM COMBINED UNITY CK	UNITY CHECK COMPONENT VALUES AXIAL	Y-AXIS	Z-AXIS	LOAD COND NO.	DIST FROM END(FT)	/-------- CONTROLLING MEMBER ACTIONS --------/ FORCE FX KIPS	TORSION MX IN-KIPS	MOMENT MY IN-KIPS	MOMENT MZ IN-KIPS	/-NEXT TWO HIGH CASES-/ COMBINED UNITY CK	LD CN	COMBINED UNITY CK	LD CN
24- 38	BR1-01	.902	.690	.012	.200	7	0.0	-399.12	-60.21	-121.63	-499.27	.825	2	.800	8
25- 26	BR2-01	.803	.535	.255	.012	8	24.4	-290.67	-84.11	718.88	158.89	.535	1	.523	2
25- 27	BR4-01	.170	.037	.021	.112	8	24.4	12.77	4.55	61.30	140.92	.165	7	.164	2
26- 27	BR2-01	.411	.104	.306	.002	8	0.0	61.59	59.35	774.86	59.92	.255	2	.255	1
26- 34	BR1-01	.979	.789	.054	.136	8	0.0	-493.77	-13.13	266.52	421.49	.814	1	.788	7
26- 38	JL1-01	1.409	.573	.859	.016	8	32.6	766.61	167.21	-11338.52	-1566.59	1.204	7	1.087	2
28- 31	WBN-01	.055	.054	.000	.001	8	2.4	-58.19	0.00	5.12	-163.84	.054	7	.046	1
28- 43	P20-01	.782	.315	.066	.401	7	32.4	-928.57	-549.49	-4352.58	10707.52	.697	8	.628	2
29- 32	WBN-01	.053	.052	.000	.001	8	2.4	-55.92	0.00	5.12	372.78	.052	7	.045	2
29- 44	P20-01	.788	.315	.112	.361	7	32.4	-927.54	593.48	-5698.93	-10250.58	.717	8	.640	2
30- 33	WBN-01	1.061	1.060	.000	.000	8	2.4	-1142.13	0.00	5.11	144.66	.873	7	.780	2
30- 45	P20-01	1.536	.745	.790	.001	8	36.1	-1967.21	-366.25	-20215.36	834.58	1.351	7	1.168	1
31- 34	WBN-01	.055	.054	.000	.001	8	0.0	58.14	-.21	-5.12	-163.84	.054	7	.046	2
32- 36	WBN-01	.053	.052	.000	.001	8	0.0	55.87	.21	-5.12	372.78	.052	7	.045	2
33- 38	WBN-01	1.058	1.058	.000	.001	8	2.5	1142.13	-.00	11.09	144.66	.875	7	.782	2
34- 35	BR5-01	.265	.081	.100	.084	8	0.0	-30.34	22.61	166.43	-151.85	.186	7	.133	1
39- 34	BR5-01	.791	.597	.188	.007	8	19.8	248.04	-3.82	233.87	44.19	.593	7	.511	2
34- 40	JL2-01	.462	.295	.030	.137	7	14.2	801.70	-687.97	-1871.45	4013.28	.412	8	.375	2
34- 53	BR1-01	1.189	.677	.402	.110	7	47.4	-449.40	-150.14	-1479.22	773.97	1.032	8	1.001	2
35- 36	BR5-01	.167	.019	.101	.047	7	19.8	8.05	-8.35	150.00	102.13	.145	8	.105	3
35- 37	BR6-01	.146	.088	.007	.051	8	0.0	-25.08	13.87	19.19	-51.68	.120	1	.117	7
39- 35	BR6-01	.149	.061	.011	.076	8	19.8	19.32	-7.64	29.35	-77.42	.117	7	.113	2
36- 37	BR5-01	.330	.158	.170	.002	8	0.0	65.73	-4.68	209.32	-23.86	.280	7	.247	2
36- 41	JL2-01	.343	.196	.024	.124	7	14.2	531.20	834.06	-1578.49	-3581.65	.313	8	.286	2
36- 49	BR1-01	.465	.073	.001	.391	7	47.4	-48.74	194.18	69.05	-1509.51	.449	8	.424	2
37- 38	BR5-01	.309	.107	.188	.014	7	37.2	-36.10	-26.49	239.02	-64.24	.182	8	.152	2
37- 39	BR6-01	.186	.116	.032	.068	8	19.8	36.61	-5.60	-12.24	65.14	.174	7	.170	2
38- 39	BR5-01	.782	.527	.231	.023	7	0.0	-177.48	2.55	273.62	-86.95	.668	8	.603	2
38- 42	JL2-01	1.246	.490	.755	.000	8	15.0	1330.99	137.12	-20009.54	106.64	1.120	7	.978	2
38- 51	BR1-01	.938	.540	.310	.088	8	55.7	-334.83	81.92	-1114.85	-594.30	.911	7	.875	1
40- 49	JL2-01	.855	.299	.160	.389	7	18.3	811.22	-664.76	-8054.85	12324.74	.835	8	.675	2
41- 51	JL2-01	.786	.199	.149	.438	7	18.3	540.79	832.78	-7823.85	-13431.62	.773	8	.623	2
42- 53	JL2-01	1.249	.494	.755	.000	8	0.0	1340.80	114.71	-20009.54	130.45	1.124	7	.981	2
43- 46	WBN-01	.024	.023	.000	.001	8	2.4	24.71	0.00	5.12	-297.35	.021	1	.021	7
43- 55	P20-01	.779	.315	.083	.381	7	0.0	-929.41	-1184.27	-4847.30	10404.46	.694	8	.626	2
44- 47	WBN-01	.022	.021	.000	.001	8	2.4	23.19	0.00	5.12	222.62	.017	2	.016	1
44- 56	P20-01	.785	.315	.132	.339	7	0.0	-927.43	1115.42	-6170.45	-9882.03	.716	8	.639	2
45- 48	WBN-01	.266	.266	.000	.001	8	2.4	286.81	0.00	5.11	194.95	.205	7	.194	1
45- 57	P20-01	1.452	.634	.816	.002	8	0.0	-1869.13	-298.19	-20215.36	868.96	1.320	7	1.137	2
46- 49	WBN-01	.024	.023	.000	.001	8	2.5	-24.69	-.21	11.09	-328.22	.021	1	.021	7
47- 51	WBN-01	.023	.022	.000	.001	8	2.5	-23.17	.21	11.09	251.58	.017	2	.016	1
48- 53	WBN-01	.267	.266	.000	.001	8	2.5	-286.81	-.00	11.09	194.95	.205	7	.194	1
49- 50	BR3-01	.450	.229	.041	.180	7	15.1	-120.42	255.51	-167.62	393.81	.394	8	.369	2
54- 49	BR3-01	1.238	.552	.646	.041	7	15.2	290.25	117.23	1315.50	330.70	1.170	8	.982	2
49- 55	JL2-01	.939	.285	.202	.452	7	0.0	773.62	-978.45	-9642.70	14399.50	.906	8	.746	2
50- 51	BR3-01	.432	.201	.054	.136	7	0.0	-126.93	-239.78	-200.71	318.65	.378	8	.354	2
50- 52	BR5-01	.223	.035	.177	.010	7	0.0	14.71	116.92	223.25	52.23	.210	8	.184	1
54- 50	BR5-01	.177	.005	.170	.002	7	15.1	1.91	-124.10	209.50	-22.92	.160	8	.145	2

3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

MEMBER NO.	GROUP ID	MAXIMUM COMBINED UNITY CK	UNITY CHECK COMPONENT VALUES AXIAL	Y-AXIS	Z-AXIS	LOAD COND NO.	DIST FROM END(FT)	/-------- CONTROLLING MEMBER ACTIONS -------/ FORCE FX KIPS	TORSION MX IN-KIPS	MOMENT MY IN-KIPS	MOMENT MZ IN-KIPS	/-NEXT TWO HIGH CASES-/ COMBINED UNITY CK	LD CN	COMBINED UNITY CK	LD CN
51- 52	BR3-01	.798	.109	.683	.006	7	0.0	-54.54	-116.59	1355.27	130.14	.614	2	.606	1
51- 56	JL2-01	.986	.280	.194	.513	7	0.0	760.43	1052.63	-9798.55	-15941.85	.933	8	.777	2
52- 53	HR3-01	.876	.030	.687	.159	8	15.1	-14.86	-114.71	1506.75	725.02	.839	7	.707	2
52- 54	HR5-01	.265	.037	.095	.133	8	0.0	15.38	-9.07	180.45	213.64	.256	7	.236	2
53- 54	BR3-01	1.364	.607	.679	.078	8	0.0	-319.14	151.47	1416.66	-479.63	1.270	7	1.069	2
53- 57	JL2-01	1.215	.566	.634	.015	8	4.6	1537.23	26.41	-16995.69	-2615.06	1.164	7	.949	2
55- 58	STL-01	.727	.048	.676	.003	7	28.5	-131.18	1360.46	-16768.54	-1159.97	.663	8	.567	2
56- 59	STL-01	.775	.052	.712	.012	7	28.5	-141.48	-1488.24	-17757.37	2259.05	.708	8	.605	2
57- 60	STL-01	.930	.107	.822	.000	8	28.5	-294.02	-528.01	20351.02	476.61	.882	7	.698	2
58- 59	BR5-01	.508	.051	.004	.453	7	29.0	21.23	-.20	52.63	557.83	.491	8	.490	2
60- 58	BR5-01	.834	.304	.421	.109	8	0.0	-103.82	-3.48	601.22	306.12	.769	7	.633	1
58- 61	STL-01	.674	.029	.643	.002	8	0.0	-81.67	-399.25	15940.62	873.89	.667	7	.526	2
58- 67	BR5-01	1.133	.665	.275	.193	7	32.6	-217.02	16.05	-353.25	296.34	1.005	2	.927	8
59- 60	BR5-01	.854	.248	.371	.235	8	29.0	103.14	-3.55	581.27	462.23	.820	7	.760	2
59- 61	BR5-01	.640	.012	.004	.624	7	0.0	-4.05	-27.92	61.07	-766.97	.634	2	.626	8
59- 64	STL-01	.761	.047	.706	.008	7	0.0	-134.07	-149.43	-17569.49	1845.98	.704	8	.600	2
60- 64	HR5-01	1.177	.653	.002	.523	8	0.0	-213.10	-18.35	28.98	-519.79	1.017	1	.967	7
60- 70	STL-01	.850	.066	.784	.001	8	0.0	-190.98	98.20	19413.15	667.75	.820	7	.646	2
61- 62	W18-01	.959	.106	.250	.603	8	0.0	36.97	-.00	530.08	139.70	.748	7	.645	1
69- 61	W18-01	.739	.375	.082	.282	8	8.7	-102.00	-.09	202.79	-62.38	.683	7	.626	1
61- 71	STL-01	.093	.020	.070	.003	8	0.0	-57.53	32.84	1763.14	-371.27	.079	7	.061	2
62- 63	W18-01	.556	.358	.003	.195	7	20.0	-37.33	-.00	6.21	-34.04	.447	2	.295	8
69- 62	W08-01	.216	.030	.000	.186	8	7.5	-3.74	.01	-.02	22.48	.209	1	.205	7
63- 64	W18-01	.352	.106	.206	.040	8	4.5	37.10	-.08	435.41	-9.29	.225	7	.177	2
63- 65	W08-01	.206	.005	.056	.144	8	7.5	.82	.01	-27.83	-17.47	.184	2	.183	7
64- 65	W18-01	.395	.229	.121	.045	7	0.0	-62.29	.00	300.47	-10.75	.391	8	.329	2
64- 72	STL-01	.084	.006	.002	.076	7	0.0	-17.83	35.59	268.86	-1906.69	.077	8	.062	2
65- 66	W08-01	.141	.002	.018	.121	7	0.0	-.15	-.01	8.80	14.60	.133	8	.124	2
65- 67	W18-01	.985	.618 K=1.0	.012	.355	7	0.0	-62.81	-.00	30.15	36.83	.797	2	.602	8
66- 67	W08-01	.145	.001 L=20.25	.021	.122	7	10.0	.22	.01	10.16	-14.82	.133	2	.105	1
70- 66	BR7-01	.298	.001	.000	.297	2	0.0	.09	7.27	-.96	54.56	.286	7	.140	8
67- 68	W08-01	.073	.003	.002 Cm=.??	.069	7	10.0	.40	-.01	-1.13	8.30	.056	2	.022	1
67- 69	W18-01	~~101~~.312	1.037	.275	~~100.000~~	8	0.0	-105.40	.02	649.06	-10.74	1.070	1	.377	7
70- 67	STL-01	.559	.065	.495	.000	8	0.0	-186.93	108.51	12247.38	34.32	.526	2	.426	2
67- 76	STL-01	.094	.021	.047	.026	8	0.0	-62.39	-64.64	-1447.21	-1070.51	.066	7	.054	2
68- 69	W08-01	.072	.001	.024	.047	8	0.0	-.03	.01	11.96	-5.65	.049	7	.044	1
70- 68	BR7-01	.255	.000	.000	.254	2	0.0	.00	-5.51	.46	-46.72	.247	7	.085	8
71- 72	W18-01	.266	.190	.034	.041	7	29.0	-9.42	-.01	84.35	-9.12	.211	2	.093	8
71- 73	W18-01	.001	.000	.001	.000	7	0.0	-.00	.00	2.97	-.00	.001	8	.001	3
71- 75	W06-01	1.463	.902	.037	.524	8	0.0	-10.76	-.00	7.05	4.10	.878	1	.235	7
71- 77	W18-01	.153	.000	.079	.075	7	0.0	-.01	.01	166.55	-17.25	.136	1	.134	2
71- 81	W18-01	.004	.000	.004	.000	8	0.0	-.00	.00	8.25	.00	.004	7	.004	3
72- 74	W18-01	.001	.000	.001	.000	8	0.0	.00	-.00	2.97	.00	.001	7	.001	3
72- 75	W06-01	.441	.264	.086	.091	7	0.0	-5.15	.00	21.45	5.46	.290	2	.152	8
72- 78	W18-01	.169	.001	.078	.091	7	0.0	.25	.02	164.35	21.00	.152	2	.148	1
72- 82	W18-01	.004	.000	.004	.000	8	0.0	-.00	.00	8.25	.00	.004	7	.004	3
76- 75	STL-01	.071	.019	.034	.018	8	0.0	-55.55	-18.71	-1039.55	-765.36	.048	7	.039	2
77- 75	W18-01	.074	.008	.014	.048	8	14.5	2.79	.08	38.11	11.22	.052	2	.052	7

Error in Synercom Program

S T R A N   M E M B E R   S T R E S S   R E P O R T   N O. 1

3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

MEMBER NO.	GROUP ID	MAXIMUM COMBINED UNITY CK	UNITY CHECK COMPONENT VALUES AXIAL	Y-AXIS	Z-AXIS	LOAD COND NO.	DIST FROM END(FT)	CONTROLLING MEMBER ACTIONS FORCE FX KIPS	TORSION MX IN-KIPS	MOMENT MY IN-KIPS	MOMENT MZ IN-KIPS	NEXT TWO HIGH CASES COMBINED UNITY CK	LD CN	COMBINED UNITY CK	LD CN
75- 78	W18-01	.038	.008	.000	.029	8	14.5	2.79	-.05	.42	-6.82	.037	7	.032	2
76- 77	BB6-01	.047	.011	.005	.031	8	14.2	-3.18	23.36	11.98	-31.43	.033	7	.027	3
76- 78	BB6-01	.076	.013	.012	.052	8	0.0	-3.72	-27.35	25.79	-54.34	.051	7	.049	2
77- 79	W18-01	.001	.000	.001	.000	8	0.0	.00	.00	2.97	-.00	.001	7	.001	3
77- 83	W18-01	.004	.000	.004	.000	8	0.0	.00	.00	8.25	-.00	.004	7	.004	3
78- 80	W18-01	.001	.000	.001	.000	8	0.0	-.00	-.00	2.97	.00	.001	7	.001	3
78- 84	W18-01	.004	.000	.004	.000	8	0.0	-.00	-.00	8.25	-.00	.004	7	.004	3

S T R A N   M E M B E R   S T R E S S   R E P O R T   N O . 2

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3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

MEMBER NO.	GROUP ID	MAXIMUM COMBINED UNITY CK	LOAD COND	DIST FROM END(FT)	FORCE FX KIPS	TORSION MX IN-KIPS	MOMENT MY IN-KIPS	MOMENT MZ IN-KIPS	Z-AXIS SHEAR UNITY CK	LD CN	Y-AXIS SHEAR UNITY CK	LD CN	KLY/RY	KLZ/RZ	NEXT HIGH UN.CK.	LD CN
					/-------- CONTROLLING MEMBER ACTIONS			--------/								
1-	4 P10-01	.565	7	6.1	-983.59	-.00	5592.70	-9294.67	.055	7	.055	7	6.0	6.0	.466	8
2-	5 P10-01	.558	7	6.1	-982.41	.00	5219.00	9121.31	.053	7	.053	7	6.0	6.0	.455	8
3-	6 P10-01	1.001	8	6.1	-1897.41	-.00	17739.53	54.08	.090	8	.090	8	6.0	6.0	.896	7
4-	7 WBN-01	.156	7	2.4	168.53	0.00	5.12	59.79	.000	8	.000	8	1.2	1.2	.154	8
4-	16 P10-01	.563	7	0.0	-972.78	106.36	5700.52	-9117.47	.018	7	.015	7	32.1	32.1	.464	8
5-	8 WBN-01	.150	7	2.4	161.44	0.00	5.12	-103.39	.000	8	.000	1	1.2	1.2	.146	8
5-	17 P10-01	.556	7	0.0	-972.07	-60.68	5521.13	8957.22	.014	7	.013	7	32.1	32.1	.453	8
6-	9 WBN-01	.270	8	2.4	290.17	0.00	5.11	-223.34	.000	8	0.000	0	1.2	1.2	.262	7
6-	18 P10-01	.990	8	0.0	-1853.41	219.41	17739.53	90.84	.037	8	.032	8	32.1	32.1	.885	7
7-	10 WBN-01	.157	7	2.5	-168.38	-.21	11.09	-150.69	.001	8	.010	7	1.2	1.2	.154	8
8-	12 WBN-01	.150	7	2.5	-161.30	.21	11.09	98.23	.001	8	.009	7	1.2	1.2	.146	8
9-	14 WBN-01	.270	8	2.5	-290.17	-.00	11.09	-223.34	.001	7	.000	8	1.2	1.2	.262	7
10-	11 BR2-01	.235	8	29.0	-94.63	54.66	65.93	-146.11	.041	8	.025	2	39.7	39.7	.235	7
15-	10 BR2-01	.490	7	29.0	-182.52	.80	382.14	111.70	.022	8	.015	8	39.7	39.7	.433	8
10-	22 JL1-01	.107	8	32.4	7.56	88.42	1244.45	-454.49	.023	7	.017	8	27.9	27.9	.070	2
11-	12 BR2-01	.218	8	29.0	-88.94	-22.64	114.26	-86.62	.025	2	.017	2	39.7	39.7	.218	7
11-	13 BR4-01	.218	7	0.0	10.21	26.10	206.60	66.73	.045	7	.027	7	52.1	52.1	.192	2
15-	11 BR4-01	.244	7	29.0	8.55	-24.36	239.78	76.76	.041	7	.025	7	52.1	52.1	.213	2
11-	22 BR3-01	.200	8	40.3	7.56	-6.50	57.66	362.02	.020	7	.017	7	64.6	64.6	.187	7
11-	24 BR3-01	.182	7	40.3	9.90	-4.95	55.06	317.36	.017	1	.015	7	64.6	64.6	.178	2
12-	13 BR2-01	.461	7	0.0	-171.43	11.15	371.19	69.60	.013	7	.010	8	39.7	39.7	.381	2
12-	24 JL1-01	.072	8	32.4	9.14	-131.56	852.30	88.65	.026	7	.018	8	27.9	27.9	.040	3
13-	14 BR2-01	.478	8	29.0	-168.09	11.39	262.53	359.72	.025	7	.015	7	39.7	39.7	.403	7
13-	15 BR4-01	.193	8	29.0	17.47	4.62	96.68	131.91	.018	8	.015	8	52.1	52.1	.191	2
13-	24 BR3-01	.778	8	0.0	-258.56	5.25	-203.46	-143.83	.015	2	.013	2	64.6	64.6	.708	1
13-	26 BR3-01	.905	7	40.3	-254.37	-9.62	-322.45	-350.08	.020	1	.018	8	64.6	64.6	.836	8
14-	15 BR2-01	.405	8	0.0	-164.09	-44.25	260.17	31.71	.041	7	.023	7	39.7	39.7	.342	7
14-	26 JL1-01	.249	8	32.4	10.70	107.72	-3134.36	327.19	.029	8	.023	8	27.9	27.9	.230	7
15-	22 BR3-01	.806	8	40.3	-262.57	-13.74	-275.48	33.23	.022	2	.017	7	64.6	64.6	.746	1
15-	26 BR3-01	.876	7	40.3	-262.45	-19.19	-288.41	265.88	.039	8	.027	8	64.6	64.6	.803	8
16-	19 WBN-01	.051	8	2.4	52.91	0.00	5.12	-461.25	.000	8	.000	1	1.2	1.2	.047	7
16-	28 P20-01	.493	7	32.4	-945.83	-359.76	2002.40	-3441.91	.032	8	.021	8	31.7	31.7	.399	8
17-	20 WBN-01	.043	8	2.4	45.35	0.00	5.12	216.36	.000	8	.000	7	1.2	1.2	.039	7
17-	29 P20-01	.490	7	32.4	-944.54	159.49	1087.33	3739.62	.018	8	.013	8	31.7	31.7	.394	8
18-	21 WBN-01	.480	8	2.4	517.67	0.00	5.11	166.11	.000	8	0.000	0	1.2	1.2	.393	7
18-	30 P20-01	1.188	8	32.6	-1830.41	174.46	-13512.01	-601.91	.042	8	.037	8	31.8	31.8	.977	7
19-	22 WBN-01	.051	8	2.5	-52.87	-.19	11.09	-519.74	.001	8	.003	8	1.2	1.2	.047	7
20-	24 WBN-01	.043	8	2.5	-45.32	.19	11.09	267.34	.001	8	.002	8	1.2	1.2	.039	7
21-	26 WBN-01	.481	8	2.5	-517.67	-.00	11.09	166.11	.001	7	.000	2	1.2	1.2	.382	7
22-	23 BR2-01	.324	7	24.4	-95.72	73.47	-196.85	362.57	.056	7	.035	7	32.5	32.5	.308	8
27-	22 BR2-01	.401	7	24.4	-83.76	13.56	601.98	265.79	.033	8	.020	8	32.5	32.5	.283	2
22-	34 JL1-01	.365	7	32.4	209.18	-150.95	2337.11	-1405.59	.040	7	.032	7	27.9	27.9	.296	8
22-	36 BR1-01	.346	8	0.0	-65.16	-32.70	362.34	-860.28	.029	8	.023	8	69.7	69.7	.302	7
23-	24 BR2-01	.342	7	0.0	-90.92	-74.85	-190.66	416.74	.059	7	.036	7	32.5	32.5	.332	8
23-	25 BR4-01	.113	8	24.4	-6.11	-29.03	52.28	-93.82	.045	8	.026	8	42.9	42.9	.101	1
27-	23 BR4-01	.110	7	24.4	7.32	-24.12	72.56	71.89	.041	8	.023	8	42.9	42.9	.102	8
24-	25 BR2-01	.655	7	0.0	233.05	.50	574.26	331.75	.026	8	.018	8	32.5	32.5	.651	8
24-	36 JL1-01	.490	7	32.4	446.61	53.38	1607.52	1263.73	.025	7	.022	7	27.9	27.9	.460	8

3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

MEMBER NO.	GROUP ID	MAXIMUM COMBINED UNITY CK	LOAD COND	DIST FROM END(FT)	FORCE FX KIPS	TORSION FX IN-KIPS	MOMENT MY IN-KIPS	MOMENT MZ IN-KIPS	Z-AXIS SHEAR UNITY CK	LD CN	Y-AXIS SHEAR UNITY CK	LD CN	KLY/RY	KLZ/RZ	NEXT HIGH UN.CK.	LD CN
					/-------- CONTROLLING	MEMBER ACTIONS	--------/									
24-	38 BR1-01	.902	7	0.0	-399.12	-80.21	-121.63	-499.27	.051	8	.034	8	81.3	81.3	.825	2
25-	26 BR2-01	.803	8	24.4	-290.67	-84.11	718.88	158.89	.061	8	.036	8	32.5	32.5	.535	1
25-	27 BR4-01	.170	8	24.4	12.77	4.55	61.30	140.92	.017	8	.014	8	42.9	42.9	.165	7
26-	27 BR2-01	.411	8	0.0	61.59	59.35	774.86	59.92	.046	8	.029	8	32.5	32.5	.255	2
26-	34 BR1-01	.979	8	0.0	-493.77	-13.13	266.52	421.49	.018	7	.017	7	69.7	69.7	.814	1
26-	38 JL1-01	1.449	8	32.6	768.61	167.21	-11338.52	-1566.59	.080	8	.070	8	28.0	28.0	1.204	7
28-	31 WBN-01	.055	8	2.4	-58.19	0.00	5.12	-163.84	.000	8	.000	8	1.2	1.2	.054	7
28-	43 P20-01	.782	7	32.4	-928.57	-549.49	-4352.58	10707.52	.054	7	.037	8	31.7	31.7	.697	8
29-	32 WBN-01	.053	8	2.4	-55.92	0.00	5.12	372.78	.000	8	.000	7	1.2	1.2	.052	7
29-	44 P20-01	.788	7	32.4	-927.54	593.48	-5698.93	-10230.58	.057	7	.039	7	31.7	31.7	.717	8
30-	33 WBN-01	1.061	8	2.4	-1142.13	0.00	5.11	144.66	.000	8	0.000	0	1.2	1.2	.873	7
30-	45 P20-01	1.536	8	36.1	-1987.21	-366.25	-20215.36	834.58	.064	8	.052	8	35.3	35.3	1.351	7
31-	34 WBN-01	.055	8	0.0	58.14	-.21	-5.12	-163.84	.001	8	.003	8	1.2	1.2	.054	7
32-	36 WBN-01	.053	8	0.0	55.87	.21	-5.12	372.76	.001	8	.003	8	1.2	1.2	.052	7
33-	38 WBN-01	1.058	8	2.5	1142.13	-.00	11.09	144.66	.001	7	.000	7	1.2	1.2	.875	7
34-	35 BR5-01	.265	8	0.0	-30.34	22.61	166.43	-151.85	.040	8	.026	8	36.2	36.2	.186	7
39-	34 BR5-01	.791	8	19.8	248.04	-3.82	233.87	44.19	.013	8	.010	8	36.2	36.2	.593	7
34-	40 JL2-01	.462	7	14.2	801.70	-687.97	-1871.45	4013.28	.062	8	.043	8	12.0	12.0	.412	8
34-	53 BR1-01	1.189	7	47.4	-449.40	-150.14	-1479.22	775.07	.086	8	.056	8	59.7	59.7	1.032	8
35-	36 BR5-01	.167	7	19.8	8.05	-8.35	150.00	102.13	.048	8	.029	8	36.2	36.2	.145	8
35-	37 BR6-01	.146	8	0.0	-25.08	13.87	19.19	-51.66	.029	8	.018	8	35.8	35.8	.120	1
39-	35 BR6-01	.149	8	19.8	19.32	-7.64	29.35	-77.42	.020	8	.013	8	35.8	35.8	.117	7
36-	37 BR5-01	.330	8	0.0	65.73	-4.68	209.32	-23.86	.016	1	.012	1	36.2	36.2	.280	7
36-	41 JL2-01	.343	7	14.2	531.20	834.06	-1574.49	-3581.65	.070	7	.047	8	12.0	12.0	.313	8
36-	49 BR1-01	.465	7	47.4	-48.74	194.18	69.05	-1509.51	.100	7	.062	7	59.7	59.7	.449	8
37-	38 BR5-01	.309	7	30.2	-36.19	-26.49	239.02	-64.24	.039	7	.023	7	59.3	59.3	.182	8
37-	39 BR6-01	.186	8	19.8	36.61	-5.60	-12.24	65.14	.020	8	.016	8	35.8	35.8	.174	7
38-	39 BR5-01	.782	7	0.0	-177.48	2.55	273.62	-86.95	.011	7	.009	7	59.3	59.3	.668	8
38-	42 JL2-01	1.246	8	15.0	1330.99	137.12	-20009.54	106.64	.106	8	.103	8	12.7	12.7	1.120	7
38-	51 BR1-01	.938	8	55.7	-334.83	81.92	-1114.85	-594.30	.056	7	.039	7	71.3	71.3	.911	7
40-	49 JL2-01	.855	7	18.3	811.22	-684.76	-8054.85	12524.74	.078	8	.059	8	15.5	15.5	.835	8
41-	51 JL2-01	.786	7	18.3	541.79	832.78	-7825.83	-13431.62	.090	8	.066	8	15.5	15.5	.773	8
42-	53 JL2-01	1.249	8	0.0	1340.80	114.71	-20009.54	130.45	.048	8	.045	8	18.0	18.0	1.124	7
43-	46 WBN-01	.024	8	2.4	24.71	0.00	5.12	-297.35	.000	8	.000	8	1.2	1.2	.021	1
43-	55 P20-01	.779	7	0.0	-929.41	-1184.27	-4847.30	10404.46	.093	7	.057	7	4.5	4.5	.694	8
44-	47 WBN-01	.022	8	2.4	23.19	0.00	5.12	222.62	.000	8	.000	8	1.2	1.2	.017	2
44-	56 P20-01	.785	7	0.0	-927.43	1115.42	-6170.45	-9182.03	.094	7	.060	7	4.5	4.5	.716	8
45-	48 WBN-01	.266	8	2.4	286.81	0.00	5.11	194.95	.000	8	0.000	0	1.2	1.2	.205	7
45-	57 P20-01	1.452	8	0.0	-1869.13	-298.19	-20215.36	868.96	.134	8	.125	8	4.5	4.5	1.320	7
46-	49 WBN-01	.024	8	2.5	-24.69	-.21	11.09	-328.22	.001	8	.001	8	1.2	1.2	.021	1
47-	51 WBN-01	.023	8	2.5	-23.17	.21	11.09	251.58	.001	7	.001	7	1.2	1.2	.017	2
48-	53 WBN-01	.267	8	2.5	-266.81	-.00	11.09	194.95	.001	7	.000	8	1.2	1.2	.205	7
49-	50 BR3-01	.450	7	15.1	-121.42	255.51	-187.62	393.81	.215	7	.118	7	20.5	20.5	.394	8
54-	49 BR3-01	1.238	7	15.2	290.25	117.23	1315.50	530.70	.116	8	.071	7	20.5	20.5	1.170	8
49-	55 JL2-01	.939	7	0.0	773.62	-978.45	-9642.70	14399.50	.141	8	.113	8	3.9	3.9	.906	8
50-	51 BR3-01	.432	7	0.0	-126.93	-239.78	-200.71	318.65	.200	7	.109	7	20.5	20.5	.378	8
50-	52 BR5-01	.223	7	0.0	14.71	116.92	223.25	52.23	.151	7	.079	7	26.0	26.0	.210	8
54-	50 BR5-01	.177	7	15.1	1.91	-124.10	209.50	-22.92	.160	7	.084	7	26.0	26.0	.160	8

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3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

MEMBER NO.	GROUP ID	MAXIMUM COMBINED UNITY CK	LOAD COND	DIST FROM END(FT)	FORCE FX KIPS	TORSION MX IN-KIPS	MOMENT MY IN-KIPS	MOMENT MZ IN-KIPS	Z-AXIS SHEAR UNITY CK	LD CN	Y-AXIS SHEAR UNITY CK	LD CN	KLY/RY	KLZ/RZ	NEXT HIGH UN.CK.	LD CN
51- 52	BR3-01	.798	7	0.0	-54.54	-116.59	1355.27	130.14	.118	8	.069	8	20.5	20.5	.614	2
51- 56	JL2-01	.986	7	0.0	760.43	1052.03	-9798.55	-15941.85	.148	8	.118	8	3.9	3.9	.933	8
52- 53	BR3-01	.876	8	15.1	-14.86	-114.71	1506.75	725.02	.122	8	.078	8	20.5	20.5	.839	7
52- 54	BR5-01	.265	8	0.0	15.38	-9.07	180.45	213.64	.026	8	.020	8	26.0	26.0	.256	7
53- 54	BR3-01	1.364	8	0.0	-319.14	151.47	1416.66	-479.63	.145	8	.088	8	20.5	20.5	1.270	7
53- 57	JL2-01	1.215	8	4.6	1557.23	26.41	-16995.69	-2615.06	.101	8	.100	8	3.9	3.9	1.104	7
55- 58	STL-01	.727	7	28.5	-131.18	1360.46	-16760.54	-1159.97	.142	7	.101	7	27.8	27.8	.663	8
56- 59	STL-01	.775	7	28.5	-141.48	-1088.24	-17757.37	2259.05	.154	7	.109	7	27.8	27.8	.708	8
57- 60	STL-01	.930	8	28.5	-294.02	-528.01	20351.02	476.61	.096	8	.080	8	27.8	27.8	.882	7
58- 59	BR5-01	.508	7	29.0	21.23	-.20	52.63	557.83	.039	8	.039	7	56.6	56.6	.491	8
60- 58	BR5-01	.834	8	0.0	-103.82	-3.48	601.22	306.12	.029	8	.027	8	56.6	56.6	.769	7
58- 61	STL-01	.674	8	0.0	-81.67	-399.25	15940.62	873.89	.071	8	.059	8	14.6	14.6	.667	7
58- 67	BR5-01	1.133	7	32.6	-217.02	16.05	-353.25	296.34	.045	8	.036	8	64.7	64.7	1.005	2
59- 60	BR5-01	.854	8	29.0	103.14	-3.55	581.27	462.23	.031	8	.029	8	56.6	56.6	.820	7
59- 61	BR5-01	.640	7	0.0	-4.05	-27.92	61.07	-766.97	.082	7	.065	7	64.7	64.7	.634	2
59- 64	STL-01	.761	7	0.0	-134.07	-149.43	-17569.49	1845.98	.066	8	.061	8	14.6	14.6	.704	8
60- 64	BR5-01	1.177	8	0.0	-213.10	-18.35	28.98	-519.79	.050	8	.039	8	64.7	64.7	1.017	1
60- 70	STL-01	.850	8	0.0	-190.98	98.20	19413.15	667.75	.065	7	.060	7	5.9	5.9	.820	7
61- 62	W18-01	.959	8	0.0	36.97	-.00	530.08	139.70	.106	8	.028	8	7.7	34.3	.748	7
69- 61	W18-01	.739	8	8.7	-102.00	-.09	202.79	-62.38	.057	8	.007	8	14.9	66.6	.683	7
61- 71	STL-01	.093	8	0.0	-57.53	32.84	1763.14	-371.27	.007	8	.006	8	14.6	14.6	.079	7
62- 63	W18-01	.556	7	20.0	-37.53	-.00	6.21	-34.04	.076	8	.002	7	34.1	152.4	.447	2
69- 62	W08-01	.216	8	7.5	-3.74	.01	-.02	22.48	.012	8	.006	1	26.3	56.1	.209	1
63- 64	W18-01	.352	8	4.5	37.10	-.08	455.41	-9.29	.074	8	.006	7	7.7	34.3	.225	7
63- 65	W08-01	.206	8	7.5	.82	.01	-27.83	-17.47	.014	8	.005	2	26.3	56.1	.184	2
64- 65	W18-01	.395	7	0.0	-62.29	.00	300.47	-10.75	.092	8	.003	7	14.9	66.6	.391	8
64- 72	STL-01	.084	7	0.0	-17.83	35.59	268.86	-1906.69	.008	7	.007	7	14.6	14.6	.077	8
65- 66	W08-01	.141	7	0.0	-.15	-.01	8.80	14.60	.014	8	.002	7	61.8	131.6	.133	8
65- 67	W18-01	.985	7	0.0	-62.81	-.00	30.15	36.83	.079	8	.002	8	34.5	154.3	.797	2
66- 67	W08-01	.145	7	10.0	.22	.01	10.16	-14.82	.009	7	.003	2	35.1	74.7	.133	2
70- 66	BR7-01	.298	2	0.0	.09	7.27	-.96	54.56	.101	8	.058	8	43.9	43.9	.286	7
67- 68	W08-01	.073	7	10.0	.40	-.01	-1.13	8.30	.007	8	.002	7	35.1	74.7	.056	2
67- 69	W18-01	101.312	8	0.0	-105.40	.02	649.06	-10.74	.115	8	.001	8	34.5	154.3	1.070	1
70- 67	STL-01	.559	8	0.0	-186.93	108.51	12247.38	34.32	.072	7	.067	7	8.8	8.8	.526	7
67- 76	STL-01	.094	8	0.0	-62.39	-64.64	-1447.21	-1070.51	.009	8	.007	8	3.9	3.9	.066	7
68- 69	W08-01	.072	8	0.0	-.03	.01	11.96	-5.65	.012	8	.001	8	61.8	131.6	.049	7
70- 68	BR7-01	.255	2	0.0	.00	-3.51	.46	-46.72	.063	8	.041	2	43.9	43.9	.247	7
71- 72	W18-01	.266	7	29.0	-9.42	-.01	84.55	-9.12	.010	7	.000	8	49.5	220.9	.211	2
71- 73	W18-01	.001	7	0.0	-.00	.00	2.97	-.00	.002	8	.000	7	5.1	22.9	.001	8
71- 75	W06-01	1.463	8	0.0	-10.76	-.00	7.05	4.10	.014	8	.000	1	135.4	238.9	.878	1
71- 77	W18-01	.153	7	0.0	-.01	.01	166.55	-17.23	.014	7	.001	1	42.8	191.3	.136	1
71- 81	W18-01	.004	8	0.0	-.00	.00	8.25	.00	.003	8	.000	7	8.5	38.1	.004	7
72- 74	W18-01	.001	8	0.0	.00	-.00	2.97	.00	.002	8	.000	2	5.1	22.9	.001	7
72- 75	W06-01	.441	7	0.0	-5.15	.00	21.45	5.46	.014	8	.001	8	135.4	238.9	.290	2
72- 78	W18-01	.169	7	0.0	.25	.02	164.35	21.00	.014	7	.001	2	42.8	191.3	.152	2
72- 82	W18-01	.004	8	0.0	-.00	.00	8.25	.00	.003	7	.000	7	8.5	38.1	.004	7
76- 75	STL-01	.071	8	0.0	-55.55	-16.71	-1039.55	-765.36	.006	8	.006	8	10.7	10.7	.048	7
77- 75	W18-01	.074	8	14.5	2.79	.08	38.11	11.22	.008	8	.001	8	24.7	110.5	.052	2

Error in Synercom Program

S T R A N   M E M B E R   S T R E S S   R E P O R T   N O . 2

3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

MEMBER NO.	GROUP ID	MAXIMUM COMBINED UNITY CK	LOAD COND	DIST FROM END(FT)	FORCE FX KIPS	TORSION MX IN-KIPS	MOMENT MY IN-KIPS	MOMENT MZ IN-KIPS	Z-AXIS SHEAR UNITY CK	LD CN	Y-AXIS SHEAR UNITY CK	LD CN	KLY/RY	KLZ/RZ	NEXT HIGH UN.CK.	LD CN
					/-------- CONTROLLING MEMBER ACTIONS			--------/								
75-	78 W18-01	.038	8	14.5	2.79	-.05	.42	-6.82	.007	7	.000	1	24.7	110.5	.037	7
76-	77 BR6-01	.047	8	18.2	-3.18	23.36	11.98	-31.43	.039	8	.020	8	32.4	32.4	.033	7
76-	78 BR6-01	.076	8	0.0	-3.72	-27.35	25.79	-54.34	.046	8	.024	8	32.4	32.4	.051	7
77-	79 W18-01	.001	8	0.0	.00	.00	2.97	-.00	.002	8	.000	7	5.1	22.9	.001	7
77-	83 W18-01	.004	8	0.0	.00	.00	8.25	-.00	.003	7	.000	7	8.5	38.1	.004	7
78-	80 W18-01	.001	8	0.0	-.00	-.00	2.97	.00	.002	7	.000	8	5.1	22.9	.001	7
78-	84 W18-01	.004	8	0.0	-.00	-.00	8.25	-.00	.003	3	.000	8	8.5	38.1	.004	7

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3-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

MEMBER NO.	GROUP ID	MAXIMUM COMBINED UNITY CK	LOAD COND NO.	DIST FROM END(FT)	AXIAL STRESS KSI	BENDING STRESS Y KSI	BENDING STRESS Z KSI	SHEAR FORCE FY KIPS	SHEAR FORCE FZ KIPS	KLY/RY	KLZ/RZ	SECOND-HIGHEST UNITY CHECK	SECOND-HIGHEST LOAD COND	THIRD-HIGHEST UNITY CHECK	THIRD-HIGHEST LOAD COND
1-	4 P10-01	.565	7	6.1	-5.22	-6.99	0.00	127.75	74.36	6.0	6.0	.466	8	.450	1
2-	5 P10-01	.558	7	6.1	-5.22	-6.83	0.00	-125.37	71.97	6.0	6.0	.455	8	.441	2
3-	6 P10-01	1.001	8	6.1	-10.08	-11.53	0.00	-.74	243.91	6.0	6.0	.896	7	.799	1
4-	7 WBN-01	.156	7	2.4	3.37	.00	.00	-.00	.36	1.2	1.2	.154	8	.137	1
4-	16 P10-01	.563	7	0.0	-5.17	-6.99	0.00	-28.97	-19.26	32.1	32.1	.464	8	.448	1
5-	8 WBN-01	.150	7	2.4	3.23	.00	-.01	-.00	.36	1.2	1.2	.146	8	.131	1
5-	17 P10-01	.556	7	0.0	-5.16	-6.84	0.00	24.98	-18.46	32.1	32.1	.453	8	.439	2
6-	9 WBN-01	.270	8	2.4	5.80	.00	-.02	0.00	.36	1.2	1.2	.262	7	.232	1
6-	18 P10-01	.990	8	0.0	-9.84	-11.53	0.00	-.74	-73.57	32.1	32.1	.885	7	.790	1
7-	10 WBN-01	.157	7	2.5	-3.37	.00	-.01	7.02	.73	1.2	1.2	.154	8	.137	1
8-	12 WBN-01	.150	7	2.5	-3.23	.00	.01	-6.72	.73	1.2	1.2	.146	8	.131	2
9-	14 WBN-01	.270	8	2.5	-5.80	.00	-.02	.00	.73	1.2	1.2	.262	7	.232	1
10-	11 BR2-01	.235	8	29.0	-3.44	-1.37	0.00	3.33	.86	39.7	39.7	.235	7	.219	1
15-	10 BR2-01	.490	7	29.0	-6.64	-3.40	0.00	.91	2.58	39.7	39.7	.433	8	.410	2
10-	22 JL1-01	.107	8	32.4	.12	2.19	0.00	7.94	7.50	27.9	27.9	.070	2	.067	1
11-	12 BR2-01	.218	8	29.0	-3.24	-1.23	0.00	2.94	1.21	39.7	39.7	.218	7	.211	1
11-	13 BR4-01	.218	7	0.0	.64	4.08	0.00	1.25	-1.53	52.1	52.1	.192	2	.189	8
15-	11 BR4-01	.244	7	29.0	.53	4.73	0.00	-1.31	1.66	52.1	52.1	.213	2	.209	1
11-	22 BR3-01	.200	8	40.3	.51	4.01	0.00	-4.40	1.00	64.6	64.6	.187	7	.187	2
11-	24 BR3-01	.182	7	40.3	.41	3.52	0.00	-4.45	.50	64.6	64.6	.178	2	.173	8
12-	13 BR2-01	.461	7	0.0	-6.24	-3.23	0.00	-1.14	-2.30	39.7	39.7	.381	2	.370	8
12-	24 JL1-01	.072	8	32.4	.13	1.42	0.00	-7.02	6.49	27.9	27.9	.040	3	.032	2
13-	14 BR2-01	.478	8	29.0	-6.11	-3.81	0.00	-2.97	2.20	39.7	39.7	.403	7	.401	1
13-	15 BR4-01	.193	8	29.0	1.09	3.07	0.00	-2.55	.79	52.1	52.1	.191	2	.190	7
13-	24 BR3-01	.778	8	0.0	-10.62	-2.72	0.00	-1.83	2.14	64.6	64.6	.708	1	.685	7
13-	26 BR3-01	.905	7	40.3	-10.45	-5.20	0.00	2.81	-2.19	64.6	64.6	.836	8	.824	2
14-	15 BR2-01	.405	8	0.0	-5.97	-2.24	0.00	1.66	-1.94	39.7	39.7	.342	7	.340	1
14-	26 JL1-01	.249	8	32.4	.17	5.21	0.00	-.87	-15.26	27.9	27.9	.230	7	.194	1
15-	22 BR3-01	.806	8	40.3	-10.78	-3.83	0.00	-1.37	-2.49	64.6	64.6	.746	1	.720	7
15-	26 BR3-01	.876	7	40.3	-10.78	-4.27	0.00	-2.59	-2.00	64.6	64.6	.803	8	.799	2
16-	19 WBN-01	.051	8	2.4	1.06	.00	-.04	.00	.36	1.2	1.2	.047	7	.042	1
16-	28 P20-01	.493	7	52.4	-6.93	-3.48	0.00	14.19	9.35	31.7	31.7	.399	8	.377	2
17-	20 WBN-01	.043	8	2.4	.91	.00	.02	-.00	.36	1.2	1.2	.039	7	.035	2
17-	29 P20-01	.490	7	32.4	-6.92	-3.40	0.00	-11.48	6.65	31.7	31.7	.394	8	.373	2
18-	21 WBN-01	.480	8	2.4	10.35	.00	.11	0.00	.36	1.2	1.2	.383	7	.347	2
18-	30 P20-01	1.188	8	32.6	-13.41	-11.80	0.00	.74	-59.73	31.8	31.8	.977	7	.872	1
19-	22 WBN-01	.051	8	2.5	-1.06	.00	-.04	1.98	.73	1.2	1.2	.047	7	.042	1
20-	24 WBN-01	.043	8	2.5	-.91	.00	.02	-1.70	.73	1.2	1.2	.039	7	.035	2
21-	26 WBN-01	.481	8	2.5	-10.35	.00	.01	.00	.73	1.2	1.2	.382	7	.346	2
22-	23 BR2-01	.324	7	24.4	-3.48	-3.53	0.00	-5.02	-.80	32.5	32.5	.308	8	.288	2
27-	22 BR2-01	.401	7	24.4	-3.05	-5.62	0.00	-.08	3.56	32.5	32.5	.283	2	.276	1
22-	34 JL1-01	.365	7	32.4	5.37	4.51	0.00	-4.38	5.42	27.9	27.9	.296	8	.290	1
22-	36 BR1-01	.346	8	0.0	-1.71	-5.22	0.00	-4.25	-2.87	69.7	69.7	.302	7	.298	1
23-	24 BR2-01	.342	7	0.0	-3.45	-3.95	0.00	5.52	.79	32.5	32.5	.332	8	.305	2
23-	25 BR4-01	.113	8	24.4	-.38	-2.02	0.00	1.51	.84	42.9	42.9	.101	1	.100	2
27-	23 BR4-01	.110	7	24.4	.46	1.92	0.00	-1.21	.78	42.9	42.9	.102	8	.097	1
24-	25 BR2-01	.655	7	0.0	8.48	5.67	0.00	.80	-3.39	32.5	32.5	.651	8	.532	1
24-	36 JL1-01	.490	7	32.4	7.20	5.38	0.00	5.87	2.16	27.9	27.9	.460	8	.395	1

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MEMBER NO.	GROUP ID	MAXIMUM COMBINED UNITY CK	LOAD COND NO.	DIST FROM END(FT)	AXIAL STRESS KSI	BENDING STRESS Y KSI	BENDING STRESS Z KSI	SHEAR FORCE FY KIPS	SHEAR FORCE FZ KIPS	KLY/RY	KLZ/RZ	SECOND-HIGHEST UNITY CHECK	SECOND-HIGHEST LOAD COND	THIRD-HIGHEST UNITY CHECK	THIRD-HIGHEST LOAD COND
24- 38	BR1-01	.902	7	0.0	-10.49	-2.88	0.00	-4.31	1.72	81.3	81.3	.825	2	.800	8
25- 26	BR2-01	.803	8	24.4	-10.57	-6.29	0.00	-1.58	3.89	32.5	32.5	.535	1	.523	2
25- 27	BR4-01	.170	8	24.4	.80	2.89	0.00	-2.52	.52	42.9	42.9	.165	7	.164	2
26- 27	BR2-01	.411	8	0.0	2.24	6.64	0.00	1.77	-4.03	32.5	32.5	.255	2	.255	1
26- 34	BR1-01	.979	8	0.0	-12.98	-2.79	0.00	4.11	1.11	69.7	69.7	.814	1	.788	7
26- 38	JL1-01	1.449	8	32.6	12.39	18.91	0.00	4.44	-32.47	28.0	28.0	1.204	7	1.087	2
28- 31	WBN-01	.055	8	2.4	-1.16	.00	-.01	.00	.36	1.2	1.2	.054	7	.046	1
28- 43	P20-01	.782	7	32.4	-6.80	-10.09	0.00	-36.44	-15.23	31.7	31.7	.697	8	.628	2
29- 32	WBN-01	.053	8	2.4	-1.12	.00	.03	.00	.36	1.2	1.2	.052	7	.045	2
29- 44	P20-01	.788	7	32.4	-6.80	-10.22	0.00	36.08	-16.34	31.7	31.7	.717	8	.640	2
30- 33	WBN-01	1.061	8	2.4	-22.84	.00	.01	0.00	.36	1.2	1.2	.873	7	.780	2
30- 45	P20-01	1.536	8	36.1	-14.56	-17.66	0.00	-.74	-74.41	35.3	35.3	1.351	7	1.168	1
31- 34	WBN-01	.055	8	0.0	1.16	-.00	-.01	-2.42	.36	1.2	1.2	.054	7	.046	2
32- 36	WBN-01	.053	8	0.0	1.12	-.00	.03	2.33	.36	1.2	1.2	.052	7	.045	2
33- 38	WBN-01	1.058	8	2.5	22.84	.00	.01	-.00	.73	1.2	1.2	.875	7	.782	2
34- 35	BR5-01	.265	8	0.0	-1.58	-3.97	0.00	-2.91	-1.59	36.2	36.2	.186	7	.133	1
39- 34	BR5-01	.791	8	19.8	12.89	4.20	0.00	-1.18	1.93	36.2	36.2	.593	7	.511	2
34- 40	JL2-01	.462	7	14.2	6.38	3.61	0.00	-36.32	-19.13	12.0	12.0	.412	8	.375	2
34- 53	BR1-01	1.189	7	47.4	-11.81	-9.34	0.00	-6.84	-7.60	59.7	59.7	1.032	8	1.001	2
35- 36	BR5-01	.167	7	19.8	.42	3.20	0.00	-2.60	1.45	36.2	36.2	.145	8	.105	3
35- 37	BR6-01	.146	8	0.0	-1.72	-1.26	0.00	-1.40	-.50	35.8	35.8	.120	1	.117	7
39- 35	BR6-01	.149	8	19.8	1.33	1.89	0.00	1.48	.48	35.8	35.8	.117	7	.113	2
36- 37	BR5-01	.330	8	0.0	3.42	3.71	0.00	.47	-1.77	36.2	36.2	.280	7	.247	2
36- 41	JL2-01	.343	7	14.2	4.23	3.19	0.00	38.42	-16.85	12.0	12.0	.313	8	.286	2
36- 49	BR1-01	.465	7	47.4	-1.28	-8.06	0.00	13.23	1.00	59.7	59.7	.449	8	.424	2
37- 38	BR5-01	.309	7	30.2	-1.88	-4.36	0.00	.90	1.65	59.3	59.3	.182	8	.152	2
37- 39	BR6-01	.186	8	19.8	2.51	1.51	0.00	-2.38	.38	35.8	35.8	.174	7	.170	2
38- 39	BR5-01	.782	7	0.0	-9.22	-5.06	0.00	-1.26	-1.75	59.3	59.3	.668	8	.603	2
38- 42	JL2-01	1.246	8	15.0	10.59	16.31	0.00	11.50	-178.15	12.7	12.7	1.120	7	.978	2
38- 51	BR1-01	.938	8	55.7	-8.80	-7.07	0.00	4.61	-6.16	71.3	71.3	.911	7	.875	1
40- 49	JL2-01	.855	7	18.3	6.46	12.00	0.00	-57.56	-37.44	15.5	15.5	.835	8	.675	2
41- 51	JL2-01	.786	7	18.3	4.30	12.67	0.00	64.44	-37.91	15.5	15.5	.773	8	.623	2
42- 53	JL2-01	1.249	8	0.0	10.67	16.31	0.00	11.50	74.43	18.0	18.0	1.124	7	.981	2
43- 46	WBN-01	.024	8	2.4	.49	.00	-.02	-.00	.36	1.2	1.2	.021	1	.021	7
43- 55	P20-01	.779	7	0.0	-6.81	-10.02	0.00	-24.32	-34.57	4.5	4.5	.694	8	.626	2
44- 47	WBN-01	.022	8	2.4	.46	.00	.02	-.00	.36	1.2	1.2	.017	2	.016	1
44- 56	P20-01	.785	7	0.0	-6.80	-10.17	0.00	32.11	-40.31	4.5	4.5	.716	8	.639	2
45- 48	WBN-01	.266	8	2.4	5.74	.00	.02	0.00	.36	1.2	1.2	.205	7	.194	1
45- 57	P20-01	1.452	8	0.0	-13.70	-17.66	0.00	-.74	227.19	4.5	4.5	1.320	7	1.137	2
46- 49	WBN-01	.024	8	2.5	-.49	.00	-.03	1.03	.73	1.2	1.2	.021	1	.021	7
47- 51	WBN-01	.023	8	2.5	-.46	.00	.02	-.97	.73	1.2	1.2	.017	2	.016	1
48- 53	WBN-01	.267	8	2.5	-5.74	.00	.02	-.00	.73	1.2	1.2	.205	7	.194	1
49- 50	BR3-01	.450	7	15.1	-4.95	-4.77	0.00	-7.34	-1.46	20.5	20.5	.394	8	.369	2
54- 49	BR3-01	1.238	7	15.2	11.92	14.83	0.00	-2.33	8.11	20.5	20.5	1.170	8	.982	2
49- 55	JL2-01	.939	7	0.0	6.16	14.15	0.00	135.43	56.81	3.9	3.9	.906	8	.746	2
50- 51	BR3-01	.432	7	0.0	-5.21	-4.12	0.00	6.04	2.01	20.5	20.5	.378	8	.354	2
50- 52	BR5-01	.223	7	0.0	.76	4.04	0.00	1.07	-1.73	26.0	26.0	.210	8	.184	1
54- 50	BR5-01	.177	7	15.1	.10	5.72	0.00	-.95	1.77	26.0	26.0	.160	8	.145	2

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MEMBER NO.	GROUP ID	MAXIMUM COMBINED UNITY CK	LOAD COND NO.	DIST FROM END(FT)	AXIAL STRESS KSI	BENDING STRESS Y KSI	BENDING STRESS Z KSI	SHEAR FORCE FY KIPS	SHEAR FORCE FZ KIPS	KLY/RY	KLZ/RZ	SECOND-HIGHEST UNITY CHECK	SECOND-HIGHEST LOAD COND	THIRD-HIGHEST UNITY CHECK	THIRD-HIGHEST LOAD COND
51- 52	BR3-01	.798	7	0.0	-2.24	-14.88	0.00	-.83	-8.52	20.5	20.5	.614	2	.606	1
51- 56	JL2-01	.986	7	0.0	6.05	15.25	0.00	-144.89	68.17	3.9	3.9	.933	8	.777	2
52- 53	BR3-01	.876	8	15.1	-.61	-18.28	0.00	-7.46	9.65	20.5	20.5	.839	7	.707	2
52- 54	BR5-01	.265	8	0.0	.80	4.93	0.00	4.11	-.35	26.0	26.0	.256	7	.236	2
53- 54	BR3-01	1.364	8	0.0	-13.11	-16.35	0.00	-2.75	-9.24	20.5	20.5	1.270	7	1.069	2
53- 57	JL2-01	1.215	8	4.6	12.23	14.02	0.00	-5.43	-179.59	3.9	3.9	1.104	7	.949	2
55- 58	STL-01	.727	7	28.5	-.96	-14.67	0.00	7.38	-31.66	27.8	27.8	.663	6	.567	2
56- 59	STL-01	.775	7	28.5	-1.04	-15.62	0.00	-12.27	-38.50	27.8	27.8	.708	8	.605	2
57- 60	STL-01	.930	8	28.5	-2.15	-17.77	0.00	-6.17	81.82	27.8	27.8	.882	7	.698	2
58- 59	BR5-01	.508	7	29.0	1.10	9.88	0.00	-10.83	.84	56.6	56.6	.491	8	.490	2
60- 58	BR5-01	.834	8	0.0	-5.40	-11.89	0.00	5.56	-3.96	56.6	56.6	.769	7	.633	1
58- 61	STL-01	.674	8	0.0	-.60	-13.93	0.00	10.77	-61.61	14.6	14.6	.667	7	.526	2
58- 67	BR5-01	1.133	7	32.6	-11.28	-8.13	0.00	-3.42	-2.89	64.7	64.7	1.005	2	.927	8
59- 60	BR5-01	.854	8	29.0	5.36	13.09	0.00	-6.34	3.86	56.6	56.6	.820	7	.760	2
59- 61	BR5-01	.640	7	0.0	-.21	-13.56	0.00	-13.13	-.86	64.7	64.7	.634	2	.626	8
59- 64	STL-01	.761	7	0.0	-.98	-15.42	0.00	18.46	78.29	14.6	14.6	.704	8	.600	2
60- 64	BR5-01	1.177	8	0.0	-11.08	-9.18	0.00	-7.12	3.03	64.7	64.7	1.017	1	.967	7
60- 70	STL-01	.850	8	0.0	-1.40	-16.95	0.00	8.82	-93.40	5.9	5.9	.820	7	.646	2
61- 62	W18-01	.959	8	0.0	2.28	5.95	13.03	3.50	-9.83	7.7	34.3	.748	7	.645	1
69- 61	W18-01	.739	8	8.7	-6.30	2.28	-5.82	.86	5.26	14.9	66.6	.683	7	.626	1
61- 71	STL-01	.093	8	0.0	-.42	-1.57	0.00	-1.77	-9.34	14.6	14.6	.079	7	.061	2
62- 63	W18-01	.556	7	20.0	-2.30	.07	-3.18	.26	.94	34.1	152.4	.447	2	.295	8
69- 62	W08-01	.216	8	7.5	-.53	-.00	4.01	-.43	.32	26.3	56.1	.209	1	.205	7
63- 64	W18-01	.352	8	4.5	2.29	4.89	-.87	.58	6.84	7.7	34.3	.225	7	.177	2
63- 65	W08-01	.206	8	7.5	.12	-1.34	-5.12	.30	-.22	26.3	56.1	.184	2	.183	7
64- 65	W18-01	.395	7	0.0	-3.45	3.37	-1.00	-.41	-3.21	14.9	66.6	.391	8	.329	2
64- 72	STL-01	.084	7	0.0	-.13	-1.68	0.00	-11.10	-2.46	14.6	14.6	.077	8	.062	2
65- 66	W08-01	.141	7	0.0	-.02	.42	2.61	.11	-.24	61.8	131.6	.133	8	.124	2
65- 67	W18-01	.985	7	0.0	-3.88	.34	5.44	.50	-1.71	34.5	154.3	.797	2	.602	8
66- 67	W08-01	.145	7	10.0	.03	.49	-2.65	.16	.23	35.1	74.7	.133	2	.105	1
70- 66	BR7-01	.298	2	0.0	.02	6.42	0.00	2.18	.01	43.9	43.9	.288	7	.140	8
67- 68	W08-01	.073	7	10.0	.06	-.05	1.48	-.10	.09	35.1	74.7	.056	2	.022	1
67- 69	W18-01	101.512	8	0.0	-6.51	7.28	-1.00	-.18	-10.65	34.5	154.3	1.070	1	.377	7
70- 67	STL-01	.559	8	0.0	-1.37	-10.69	0.00	8.73	-108.85	8.8	8.8	.526	7	.426	2
67- 76	STL-01	.094	8	0.0	-.46	-1.57	0.00	-6.00	8.65	3.9	3.9	.066	7	.054	2
68- 69	W08-01	.072	8	0.0	-.00	.57	-1.01	-.05	-.33	61.8	131.6	.049	7	.044	1
70- 68	BR7-01	.255	2	0.0	.00	5.50	0.00	-2.15	-.00	43.9	43.9	.247	7	.085	8
71- 72	W18-01	.266	7	29.0	-.58	.95	-.85	-.00	.93	49.5	220.9	.211	2	.093	8
71- 73	W18-01	.001	7	0.0	-.00	.03	-.00	-.00	-.16	5.1	22.9	.001	8	.001	3
71- 75	W06-01	1.463	8	0.0	-2.36	.70	1.27	.02	-.19	135.4	238.9	.878	1	.235	7
71- 77	W18-01	.153	7	0.0	-.00	1.87	-1.01	-.07	-1.32	42.8	191.3	.136	1	.134	2
71- 81	W18-01	.004	8	0.0	-.00	.09	.00	.00	-.28	8.5	38.1	.004	7	.004	3
72- 74	W18-01	.001	8	0.0	.00	.03	.00	-.00	-.17	5.1	22.9	.001	7	.001	3
72- 75	W06-01	.441	7	0.0	-.69	2.14	1.69	.03	-.27	135.4	238.9	.290	2	.152	8
72- 78	W18-01	.169	7	0.0	.12	1.84	1.96	.09	-1.30	42.8	191.3	.152	2	.148	1
72- 82	W18-01	.004	8	0.0	-.00	.09	.00	.00	-.27	8.5	38.1	.004	7	.004	3
76- 75	STL-01	.071	8	0.0	-.41	-1.13	0.00	-6.00	8.15	10.7	10.7	.048	7	.039	2
77- 75	W18-01	.074	8	14.5	.17	.43	1.05	-.14	.67	24.7	110.5	.052	2	.052	7

Error in Sponsor Program

S T R A N   M E M B E R   S T R E S S   R E P O R T   N O .   5

PAGE 4
DATE 04/27/76

5-PILE ACMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

MEMBER NO.	GROUP ID	MAXIMUM COMBINED UNITY CK	LOAD COND NO.	DIST FROM END(FT)	AXIAL STRESS KSI	BENDING STRESS Y KSI	BENDING STRESS Z KSI	SHEAR FORCE FY KIPS	SHEAR FORCE FZ KIPS	KLY/RY	KLZ/RZ	SECOND-HIGHEST UNITY CHECK	SECOND-HIGHEST LOAD COND	THIRD-HIGHEST UNITY CHECK	THIRD-HIGHEST LOAD COND
75- 78	W18-01	.038	8	14.5	.17	.00	-.64	.01	.33	24.7	110.5	.037	7	.032	2
76- 77	BR6-01	.047	8	18.2	-.22	-.77	0.00	.14	.31	32.4	32.4	.033	7	.027	3
76- 78	BR6-01	.076	8	0.0	-.25	-1.37	0.00	-.36	-.40	32.4	32.4	.051	7	.049	2
77- 79	W18-01	.001	8	0.0	.00	.03	-.00	-.00	-.17	5.1	22.9	.001	7	.001	3
77- 83	W18-01	.004	8	0.0	.00	.09	-.00	-.00	-.27	8.5	38.1	.004	7	.004	3
78- 80	W18-01	.001	8	0.0	-.00	.03	.00	.00	-.16	5.1	22.9	.001	7	.001	3
78- 84	W18-01	.004	8	0.0	-.00	.09	-.00	-.00	-.27	8.5	38.1	.004	7	.004	3

```
JYJOCZS.   04/27/76. *UNITED COMPUTING 07, APEX/SL, H,0,25

10.36.11$STRAN,CM100,T500,RT.
10.36.11$FL        64      0.000
10.36.12$AC3400C880023,2777100CC )R
10.36.12. 04/27/76.JYJOCZS
10.36.12$FL     3392      0.001
10.36.12.GET,TAPE26=SPFILE(LIBRARY)
10.36.13.READY -    SPFILE
10.36.13.GET,STRAN=STRANS(LIBRARY)
10.36.13.DAF READY -          STRANS
10.36.13.GET,TAPE3=S771C2.
10.36.18.READY -    S771C2
10.36.18.RFL,170000.
10.36.18$FL      4096      0.004       0        0.
10.36.18$FI       239         3
10.36.19.STRAN.
10.36.19$FLS  61440      0.004
10.36.19$FLA  61440      0.364      336         1
10.36.19.FL REQUIRED TO LOAD      62117B ( 25679)
10.36.19.FL REQUIRED TO EXECUTE  52100B ( 21568)
10.36.19$FL    61440      0.364
10.36.31.$SC START STRAN6
10.36.31.
10.36.31.  SSSSSSSSSSSSSSSSSSSSSSSSSSSSSS
10.36.31. SSSSSSSSSSSSSSSSSSSSSSSSSSSSSSS
10.36.31. SSSSSSSSSSSSSSSSSSSSSSSSSSSSSSS
10.36.31. SSSSSSSSSSSSSSSSSSSSSSSSSSSSSSS
10.36.31. SSSSSSS
10.36.31. SSSSSSS TTTTTTTTTTTTTTTTTTTTTTT
10.36.31. SSSSSSS TTTTTTTTTTTTTTTTTTTTTTT
10.36.31. SSSSSSS TTTTTTTTTTTTTTTTTTTTTTT
10.36.31. SSSSSSS TTTTTTTTTTTTTTTTTTTTTTT
10.36.31. SSSSSSS          TTTTTTT
10.36.31. SSSSSSSSSSSSSSS TTTTTTT SSSSSS
10.36.31. SSSSSSSSSSSSSSS TTTTTTT SSSSSSS
10.36.31. SSSSSSSSSSSSSSS TTTTTTT SSSSSSS
10.36.31. SSSSSSSSSSSSSSS TTTTTTT SSSSSSS
10.36.31.                 TTTTTTT SSSSSSS
10.36.31. SSSSSSSSSSSSSSS TTTTTTT SSSSSSS
10.36.31. SSSSSSSSSSSSSSS TTTTTTT SSSSSSS
10.36.31. SSSSSSSSSSSSSSS TTTTTTT SSSSSSS
10.36.31. SSSSSSSSSSSSSSS TTTTTTT SSSSSS
10.36.31.
10.36.31.    SYNERCOM TECHNOLOGY, INC.
10.36.31.     S T R A N 6
10.36.35.         MOD 12
10.38.15.3-PILE ACMR STRUCTURE -- U.S. NAVY  (36-
10.38.15.IN. DIAMETER PILING) -- C.CHERN
10.38.15.04/27/76
10.38.15...  5 UNITS     84 JOINTS    151 MEMBERS
10.38.15...  6 BASIC LOADS ON  1206 LOAD CARDS
10.38.15...  2 COMBINED LOADS
10.38.15...UNITY CHECK REQUESTED
10.38.38.UNIT  1, 20 JT ELIM,  7 JT FWD, CYCLE  1
10.40.09.UNIT  2, 20 JT ELIM,  8 JT FWD, CYCLE  1
10.40.55.UNIT  3, 20 JT ELIM,  4 JT FWD, CYCLE  1
10.41.53.UNIT  4, 11 JT ELIM, 11 JT FWD, CYCLE  1
10.42.08.UNIT  4, 10 JT ELIM,  1 JT FWD, CYCLE  1
```

```
10.42.28.BACKWARD SUBSTITUTION
10.42.47.PRINTING DEFLECTIONS
10.42.56.COMPUTING FORCES
10.44.09.COMPUTING UNITY CHECK
10.44.15.COMPUTING EQUILIBRIUM
10.44.23.ASC STOP   STRAN
10.44.23.STOP
10.44.23$SH*  61440    26.355    22561     3414.
10.44.23$FI     30          2
10.44.23.COST.
10.44.23$FL   61440    26.355
10.44.24.               SERVICE UNITS=    214.2
10.44.24.               JOB COST=$       53.55
10.44.24$FL   17288    26.375        13          5
10.44.24.EXIT.
10.44.24$JTOO  2368    26.375
10.44.24.     *FL*  *CPU SEC. *DISC PRUS* DISC ACC
10.44.24.*P.F. PRUS*P.F. ACC *TAPE PRUS* TAPE ACC
```

A-6 MEMBER WEIGHT TAKEOFF

CHERN 00442705 7978 LEC9016 SYSMSG

```
LL          FFFFFFFFFFFFF   CCCCCCCCCCC    99999999999     0000000       11     66666666666
LL          FFFFFFFFFFFFF  CCCCCCCCCCCCC  9999999999999   000000000     111    6666666666666
LL          FF             CC         CC  99         99  00       00   1111    66
LL          FF             CC         CC  99         99  00       00     11    66
LL          FF             CC             99         99  00       00     11    66
LL          FFFFFFFFF      CC             9999999999999  00       00     11    666666666666
LL          FFFFFFFFF      CC              999999999999  00       00     11    6666666666666
LL          FF             CC                        99  00       00     11    66         66
LL          FF             CC         CC             99  00       00     11    66         66
LL          FF             CC         CC             99   00     00      11    66         66
LLLLLLLLLLLLL FFFFFFFFFFFFF CCCCCCCCCCCCC 9999999999999  000000000    111111   6666666666666
LLLLLLLLLLLLL FFFFFFFFFFFFF  CCCCCCCCCCC  99999999999     0000000     111111    66666666666
```

```
         JJ   00000000000   BBBBBBBBBBBB     777777777777  99999999999  777777777777  BBBBBBBBBBB
         JJ  0000000000000  BBBBBBBBBBBBB    777777777777 9999999999999 777777777777  BBBBBBBBBBBBB
         JJ  00         00  BB          BB   77        77 99         99 77        77  BB          BB
         JJ  00         00  BB          BB            77  99         99          77   BB          BB
         JJ  00         00  BB          BB           77   99         99         77    BB          BB
         JJ  00         00  BBBBBBBBBBBBB           77    9999999999999        77     BBBBBBBBBBBB
         JJ  00         00  BBBBBBBBBBBBB          77      999999999999       77      BBBBBBBBBBBB
         JJ  00         00  BB          BB        77                 99      77       BB          BB
JJ       JJ  00         00  BB          BB        77                 99      77       BB          BB
JJ       JJ  00         00  BB          BB       77                  99     77        BB          BB
JJJJJJJJJJJJJ 0000000000000 BBBBBBBBBBBBB        77     9999999999999       77        BBBBBBBBBBBBB
 JJJJJJJJJJJ   00000000000  BBBBBBBBBBBB         77      999999999999       77         BBBBBBBBBBB
```

```
 SSSSSSSSSSS   YY        YY   SSSSSSSSSSS  MM          MM  SSSSSSSSSSS   GGGGGGGGGGG
SSSSSSSSSSSSS   YY      YY   SSSSSSSSSSSSS MMM        MMM SSSSSSSSSSSSS GGGGGGGGGGGGG
SS         SS    YY    YY    SS         SS MMMM      MMMM SS         SS GG         GG
SS                YY  YY     SS            MM MM    MM MM SS            GG         GG
SS                 YYYY      SS            MM  MM  MM  MM SS            GG
SSSSSSSSSSSS        YY       SSSSSSSSSSSS  MM   MMMM   MM SSSSSSSSSSSS  GG
 SSSSSSSSSSSS       YY        SSSSSSSSSSSS MM    MM    MM  SSSSSSSSSSSS GG        GGGG
           SS       YY                  SS MM          MM            SS GG       GGGGG
           SS       YY                  SS MM          MM            SS GG          GG
SS         SS       YY       SS         SS MM          MM SS         SS GG          GG
SSSSSSSSSSSSS       YY       SSSSSSSSSSSSS MM          MM SSSSSSSSSSSSS GGGGGGGGGGGGG
 SSSSSSSSSSS        YY        SSSSSSSSSSS  MM          MM  SSSSSSSSSSS   GGGGGGGGGGG
```

CHERN 00442705 7978 LEC9016 SYSMSG

```
 ISV40 JOB ORIGIN FROM GROUP=RM027    , DSP=CR , DEVICE=RMT27RD1, 0A3
//LEC9016 JOB (00442705002777100PLEC27616),'CHERN          ',PRTY=4,CLASS=A,C
// TIME=(005,00),REGION=250K
/*MAIN LINES=(010,W),CARDS=(00,C)
//JOBLIB         DD DSN=DCPROD.LIB06,DISP=SHR
//               EXEC PGM=LEC27010
//FT06F001       DD SYSOUT=A
//FT05F001 DD *
/*

 LEC9016  IEF403I LEC9016  STARTED      TIME=10.59.56
 LEC9016  IEF234E D 6R3,ASP6R3
*LEC9016 *42 IECASPO 6R3 IS LEC9016  A                 FT06F001
*LEC9016 *43 IECASPO 6R4 IS LEC9016                    ASPI0001
 LEC9016  IEC202F K 6R4,017978,NL,LEC9016,
 LEC9016  TT=LEC9016 CC=00442705 P=2777100 P J=LEC27616 =CHERN        A=7978
 LEC9016  IEF404I LEC9016  ENDED       TIME=11.00.17
//LEC9016 JOB (00442705002777100PLEC27616),'CHERN          ',PRTY=4,CLASS=A,*
// TIME=(005,00),REGION=250K
//JOBLIB         DD DSN=DCPROD,LIB06,DISP=SHR
//               EXEC PGM=LEC27010
//FT06F001       DD SYSOUT=A
//FT05F001 DD UNIT=(CTC,,DEFER),DSNAME=&&ASPI0001,                          *
// DISP=(OLD,DELETE),VOL=SER=017978,DCB=(LRECL=80,BLKSIZE=80,RECFM=F)
//
 IEF236I ALLOC. FOR LEC9016
 IEF237I 104    ALLOCATED TO JOBLIB
 IEF237I 6R3    ALLOCATED TO FT06F001
 IEF237I 6R4    ALLOCATED TO FT05F001
IEF142I - STEP WAS EXECUTED - COND CODE 0000
IEF285I   DCPROD.LIB06                                   PASSED
IEF285I   VOL SER NOS= ONL002.
IEF285I   SYS76124.T105932.RV001.LEC9016.ASPOA001        DELETED
IEF285I   VOL SER NOS= ASP6R3.
IEF285I   SYS76124.T105932.RV001.LEC9016.ASPI0001        DELETED
IEF285I   VOL SER NOS= 017978.
IEF373I STEP /          / START 76124.1059
IEF374I STEP /          / STOP  76124.1100 CPU    0MIN 00.32SEC STOR VIRT 232K
$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
$                                                                                                                                  $
$                                                   PACES DATA ACQUISITION SYSTEM                                                  $
$                                                                                                                                  $
* STEP NAME                     START TIME 10.59.53.41    MAIN CORE REQD   250 K    LCS CORE REQD     0 K    STEP CPU     00.00.00.32 *
* PGM NAME        LEC27010      STOP  TIME 11.00.17.35    MAIN CORE USED   232 K    LCS CORE USED     0 K    JOB  CPU     00.00.00.32 *
* DISPATCH PRTY  1              ELAP. TIME 00.00.23.94    MAIN CORE BORRWD   0 K    LCS CORE BORRWD   0 K    CONDITION CODE      0000 *
*                                                                                                                                  *
$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
$                                                              EXCP STATISTICS                                                     $
$                                                                                                                                  $
$ UNIT    EXCP COUNT       UNIT   EXCP COUNT      UNIT   EXCP COUNT      UNIT   EXCP COUNT      UNIT   EXCP COUNT      UNIT   EXCP COUNT $
$                                                                                                                                  $
$  404            0        6R3           235      6R4            43                                                                $
$                                                           EXCP TOTAL         278                                                 $
$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
IEF374I STEP/           / TOTAL EXCP 000278
IEF285I   DCPROD.LIB06                                   KEPT
IEF285I   VOL SER NOS= ONL002.
IEF375I  JOB /LEC9016 / START 76124.1059
```

CHERN 00442705 7978 A LEC9016 FTO6F001

```
LL            EEEEEEEEEEEE   CCCCCCCCCCC    99999999999     00000000      11       666666666666
LL            EEEEEEEEEEEE  CCCCCCCCCCCC   9999999999999   0000000000    111      6666666666666
LL            EE            CC        CC  99         99   00        00  1111      66
LL            EE            CC        CC  99         99   00        00    11      66
LL            EE            CC            99         99   00        00    11      66
LL            EEEEEEEEE     CC            9999999999999   00        00    11      666666666666
LL            EEEEEEEEE     CC             999999999999   00        00    11      6666666666666
LL            EE            CC                       99   00        00    11      66         66
LL            EE            CC        CC             99   00        00    11      66         66
LL            EE            CC        CC             99   00        00    11      66         66
LLLLLLLLLLLL  EEEEEEEEEEEE  CCCCCCCCCCCC  9999999999999   0000000000    111111    6666666666666
LLLLLLLLLLLL  EEEEEEEEEEEE   CCCCCCCCCCC   99999999999     00000000     111111     66666666666

          JJ   DDDDDDDDDDD   BBBBBBBBBBB     777777777777   99999999999   777777777777   BBBBBBBBBBB
          JJ  DDDDDDDDDDDD  BBBBBBBBBBBB     777777777777  9999999999999  777777777777  BBBBBBBBBBBB
          JJ  DD        DD  BB        BB     77        77  99         99  77        77  BB        BB
          JJ  DD        DD  BB        BB             77    99         99          77    BB        BB
          JJ  DD        DD  BB        BB            77     99         99         77     BB        BB
          JJ  DD        DD  BBBBBBBBBBB            77      9999999999999        77       BBBBBBBBBB
          JJ  DD        DD  BBBBBBBBBBB            77       99999999999         77       BBBBBBBBBB
          JJ  DD        DD  BB        BB          77                 99        77     BB        BB
JJ        JJ  DD        DD  BB        BB          77                 99        77     BB        BB
JJ        JJ  DD        DD  BB        BB         77                  99       77      BB        BB
JJJJJJJJJJJJ  DDDDDDDDDDDD  BBBBBBBBBBBB         77        9999999999999      77      BBBBBBBBBBBB
 JJJJJJJJJJ    DDDDDDDDDDD  BBBBBBBBBBB          77         99999999999       77       BBBBBBBBBBB

FFFFFFFFFFFF  TTTTTTTTTTTT    00000000    666666666666  FFFFFFFFFFFF   00000000     00000000      11
FFFFFFFFFFFF  TTTTTTTTTTTT   0000000000  6666666666666  FFFFFFFFFFFF  0000000000   0000000000    111
FF                 TT       00        00 66             FF            00        00 00        00  1111
FF                 TT       00        00 66             FF            00        00 00        00    11
FF                 TT       00        00 66             FF            00        00 00        00    11
FFFFFFFFF          TT       00        00 666666666666   FFFFFFFFF     00        00 00        00    11
FFFFFFFFF          TT       00        00 6666666666666  FFFFFFFFF     00        00 00        00    11
FF                 TT       00        00 66         66  FF            00        00 00        00    11
FF                 TT       00        00 66         66  FF            00        00 00        00    11
FF                 TT       00        00 66         66  FF            00        00 00        00    11
FF                 TT        0000000000  6666666666666  FF             0000000000   0000000000   111111
FF                 TT         00000000    66666666666   FF              00000000     00000000    111111
```

CHERN 00442705 7978 A LEC9016 FTO6F001

LIST OF INPUT DATA -- ACMR 3-PILE STRUCTURE MATERIAL LISTING -- U.S.NAVY -- C.CHERN

1	36.000	1.500	0.0	3	160.000	PILING
1	36.000	1.750	0.0	3	50.000	PILING
1	36.000	1.250	0.0	3	22.000	PILING
1	41.000	[illegible]	0.0	3	6.000	JACKET LEG JOINT CAN
1	41.000	1.000	0.0	3	10.000	JACKET LEG JOINT CAN
1	41.000	1.000	0.0	3	18.000	JACKET LEG JOINT CAN
1	42.000	1.500	0.0	3	21.200	JACKET LEG SPLASH ZN
1	40.000	0.500	0.0	3	25.400	JACKET LEG
1	40.000	0.500	0.0	3	25.400	JACKET LEG
1	24.000	0.750	0.0	3	7.000	JACKET BRACE JT CAN
1	18.000	0.500	0.0	6	25.500	JKT HORI. BRACE 1ST
1	14.000	0.375	0.0	3	27.000	JKT HORI. BRACE 1ST
1	16.000	0.500	0.0	6	40.000	JKT VERT. BRACE 1ST
1	18.000	0.500	0.0	6	24.340	JKT HORI. BRACE 2ND
1	14.000	0.375	0.0	3	24.380	JKT HORI. BRACE 2ND
1	20.000	0.625	0.0	3	54.610	JKT VERT. BRACE 2ND
1	12.750	0.500	0.0	6	19.770	JKT HORI. BRACE 3RD
1	12.750	0.375	0.0	3	19.770	JKT HORI. BRACE 3RD
1	20.000	0.625	0.0	3	10.000	JKT VERT. BRACE 3RD
1	22.000	1.000	0.0	3	13.800	JKT VERT. BRACE 3RD
1	16.000	0.500	0.0	6	15.150	JKT HORI. BRACE 4TH
1	12.750	0.500	0.0	3	15.150	JKT HORI. BRACE 4TH
1	36.000	1.250	0.0	3	57.000	SUPER-STRUCTURE LEGS
1	12.750	0.500	0.0	3	29.000	SUPER-STRUCTURE BRAC
1	12.750	0.500	0.0	3	32.650	SUPER-STRUCTURE BRAC
1	12.750	0.375	0.0	2	18.000	SUPER-STRUCTURE BRAC
1	6.625	0.280	0.0	2	9.000	SUPER-STRUCTURE BRAC
2	18.000	50.000	0.0	3	29.000	EQUIPMENT DECK
2	8.000	24.000	0.0	2	25.000	EQUIPMENT DECK
2	8.000	24.000	0.0	10	20.000	EQUIPMENT DECK
3	20.000	25.000	0.250	1	0.0	EQUIPMENT DECK
2	18.000	50.000	0.0	4	35.000	TOP DECK
2	12.000	27.000	0.0	4	35.000	TOP DECK
2	6.000	15.500	0.0	2	29.000	TOP DECK
6	12.000	25.000	0.0	4	35.000	TOP DECK
6	12.000	25.000	0.0	4	3.000	TOP DECK
3	0.330	5.750	0.375	57	0.0	TOP DECK
3	35.000	35.000	0.250	1	0.0	TOP DECK
3	0.420	0.830	1.000	12	0.0	SHIMS

MATERIAL LISTING PROGRAM

```
****************************************************
*                                                  *
*          CREST ENGINEERING, INC.                 *
*                                                  *
*             TULSA, OKLAHOMA                      *
*                                                  *
*                                                  *
*                                                  *
*                                                  *
*         CREATED IN APRIL 1974                    *
*         MODIFIED FEB 1975                        *
*                                                  *
*                                                  *
*                                                  *
****************************************************
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CCCCCCCCCCCCCCCCCCCCCCCCC FFFFFFFFFFFFFFFFFFFFFFFFF
CCCCCCCCCCCCCCCCCCCCCCCCC FFFFFFFFFFFFFFFFFFFFFFFFF
CCCCCCCCCCCCCCCCCCCCCCCCC FFFFFFFFFFFFFFFFFFFFFFFFF
CCCCCCCCCCCCCCCCCCCCCCCCC FFFFFFFFFFFFFFFFFFFFFFFFF
CCCCCCCCCCCCCCCCCCCCCCCCC FFFFFFFFFFFFFFFFFFFFFFFFF
CCCCCCCCCC                FFFFFFFFF
CCCCCCCCCC FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
CCCCCCCCCC FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
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ACMR 3-PILE STRUCTURE MATERIAL LISTING -- U.S.NAVY -- C.CHERN

ACMR 3-PILE STRUCTURE MATERIAL LISTING -- U.S.NAVY -- C.CHERN

PIPE

NOMINAL DIMENSION (IN X IN)	QUANTITY	MEMBER LENGTH (FT)	TOTAL LENGTH (FT)	TOTAL WEIGHT (POUNDS)
42.000 O.D. X 1.500 WT	3	21.20	63.60	41303.4
41.000 O.D. X 1.000 WT	3	18.00	54.00	23090.7
41.000 O.D. X 1.000 WT	3	10.00	30.00	12828.2
41.000 O.D. X 1.000 WT	3	6.00	18.00	7696.9
40.000 O.D. X 0.500 WT	3	25.44	76.32	16113.4
40.000 O.D. X 0.500 WT	3	23.44	70.32	14846.6
36.000 O.D. X 1.750 WT	3	50.00	150.00	96110.9
36.000 O.D. X 1.500 WT	3	160.00	480.00	265542.8
36.000 O.D. X 1.250 WT	3	57.00	171.00	79004.2
36.000 O.D. X 1.250 WT	3	22.00	66.00	30647.3
24.000 O.D. X 0.750 WT	3	7.00	21.00	3914.6
20.000 O.D. X 1.000 WT	3	13.80	41.40	8408.9
20.000 O.D. X 0.625 WT	3	54.60	163.80	21204.0
20.000 O.D. X 0.625 WT	3	10.00	30.00	3883.5
18.000 O.D. X 0.500 WT	6	25.50	153.00	14311.4
18.000 O.D. X 0.500 WT	6	24.38	146.28	13682.8
16.000 O.D. X 0.500 WT	6	40.00	240.00	19883.6
16.000 O.D. X 0.500 WT	6	15.15	90.90	7530.9
14.000 O.D. X 0.375 WT	3	29.00	87.00	4751.9
14.000 O.D. X 0.375 WT	3	24.38	73.14	3994.9
12.750 O.D. X 0.500 WT	3	32.65	97.95	6413.5
12.750 O.D. X 0.500 WT	3	29.00	87.00	5696.5
12.750 O.D. X 0.500 WT	6	19.77	118.62	7766.9
12.750 O.D. X 0.500 WT	3	15.15	45.45	2975.9
12.750 O.D. X 0.375 WT	3	19.77	59.31	2942.3
12.750 O.D. X 0.375 WT	2	18.00	36.00	1785.9
6.625 O.D. X 0.280 WT	2	9.00	18.00	341.9

TOTAL WEIGHT OF PIPE MEMBERS = 717073.1

ACMR 3-PILE STRUCTURE MATERIAL LISTING -- U.S.NAVY -- C.CHERN

W SHAPE

NOMINAL DIMENSION	QUANTITY	MEMBER LENGTH (FT)	TOTAL LENGTH (FT)	TOTAL WEIGHT (POUNDS)
W 18 X 50.00	4	35.00	140.00	7000.0
W 18 X 50.00	3	29.00	87.00	4350.0
W 12 X 27.00	4	35.00	140.00	3780.0
W 8 X 24.00	2	25.00	50.00	1200.0
W 8 X 24.00	10	20.00	200.00	4800.0
W 6 X 15.50	2	29.00	58.00	899.0

TOTAL WEIGHT OF W-SHAPE MEMBERS= 22029.0

ACMR 3-PILE STRUCTURE MATERIAL LISTING -- U.S. NAVY -- C. CHERN

PLATE

NOMINAL DIMENSION (FT X FT X IN)	QUANTITY	TOTAL AREA (SQ. FT)	TOTAL WEIGHT (POUNDS)
0.42 X 0.85 X 1.000	12	4.18	170.8
0.33 X 5.75 X 0.375	57	108.16	1656.2
35.00 X 35.00 X 0.250	1	1225.00	12505.2
20.00 X 25.00 X 0.250	1	500.00	5104.2

TOTAL WEIGHT OF PLATES = 19436.3

ACMR 3-PILE STRUCTURE MATERIAL LISTING -- U.S.ARMY -- C.CHERN

CHANNELS

NOMINAL DIMENSION	QUANTITY	MEMBER LENGTH (FT)	TOTAL LENGTH (FT)	TOTAL WEIGHT (POUNDS)
C 12 X 25.00	4	35.00	140.00	3500.0
C 12 X 25.00	4	3.00	12.00	300.0

TOTAL WEIGHT OF CHANNELS = 3800.0

TOTAL WEIGHT = 762338.4

BILL OF MATERIALS SUMMARY
ACMR 3-PILE STRUCTURE MATERIAL LISTING -- U.S.NAVY -- C.CHERN

NOMINAL DIMENSION	TOTAL LENGTH (FEET)	TOTAL WEIGHT (POUNDS)
PIPE		
42.000 O.D. X 1.500 WT	63.60	41305.43
41.000 O.D. X 1.000 WT	102.00	43615.71
40.000 O.D. X 0.500 WT	146.64	30960.07
36.000 O.D. X 1.750 WT	150.00	96110.88
36.000 O.D. X 1.500 WT	480.00	265542.75
36.000 O.D. X 1.250 WT	237.00	110351.44
24.000 O.D. X 0.750 WT	21.00	3914.59
20.000 O.D. X 1.000 WT	41.40	8408.65
20.000 O.D. X 0.625 WT	193.80	25087.58
18.000 O.D. X 0.500 WT	299.28	27990.20
16.000 O.D. X 0.500 WT	330.90	27414.55
14.000 O.D. X 0.375 WT	160.14	6746.81
12.750 O.D. X 0.500 WT	349.12	22852.78
12.750 O.D. X 0.375 WT	95.31	1728.21
6.625 O.D. X 0.280 WT	18.00	341.86
* SHAPE		
* 18 X 50.00	227.00	11350.00
* 12 X 27.00	140.00	3780.00

BILL OF MATERIALS SUMMARY
ACMR S-PILE STRUCTURE MATERIAL LISTING -- U.S. NAVY -- C. CHERN

W 8 x 24.00	250.00	[illegible]
W 6 x 15.50	58.00	899.00

CHANNELS

C 12 x 25.00	152.00	3800.00

PLATE

1.000 THICKNESS	4.18	170.81
0.375 THICKNESS	108.16	1656.16
0.250 THICKNESS	1725.00	17609.47

TOTAL WEIGHT 762338.44 LBS

```
ASP JOB NO. = 7978                                   DATE = 76.124

//LEC9016 JOB (00442705002777100PLEC27616),'CHERN      ',PRTY=4,CLASS=A,C7978

       ELAPSED TIME ON MAIN = A        = 000.49, START TIME = 10.59.53

       DDNAME = SYSMSG                 PRINTED ON RM027PR1, LINES = 000077
       DDNAME = FT06F001               PRINTED ON RM027PR1, LINES = 000235
       LINES OUTPUT FOR THIS JOB = 000312

     CARDS FROM MAIN FOR THIS JOB = NONE
```

CHERN 00442705 0221 LFC9016 SYS 56

LFC9016

JOB 0221

SYSMSG

CHERN 00442705 0221 LFC9016 SYS 56

```
/I3V00 JOB ORIGIN FROM GROUP=R0027   , DSP=CR , DEVICE=R0027RD1, 0A3
//LEC9016 JOB (004427,5,2777100,LFC27616),TCHERN      T,PRTY=4,CLASS=A,C
// TIME=(005,00),REGION=250K
/*MAIN LINES=(010,A),CARDS=(00,C)
//JOBLIB        DD DSN=DCPROD.LIB06,DISP=SHR
//              EXEC PGM=LFC27010
//FT06F001      DD SYSOUT=A
//FT05F001 DD *
/*

 LEC9016  IEF403I LEC9016  STARTED     TIME=17.15.32
 LEC9016  IEF236E D 6AF,ASP6AF
*LEC9016 *76 IECASP0 6AF IS LEC9016  A                       FT06F001
*LEC9016 *77 IECASP0 6A2 IS LEC9016                          ASPI0001
 LEC9015  IEC232E K 6A2,PID221,NL,LEC9016,
 LEC9016  TI=LEC9016 CC=004427705 P=2777100 P J=LEC27616 TCHERN       A=0221
 LEC9016  IEF404I LEC9016  ENDED       TIME=17.15.46
//LEC9016 JOB (004427050027771,DCPLFC27616),TCHERN      T,PRTY=4,CLASS=A,*
// TIME=(005,00),REGION=250K
//JOBLIB        DD DSN=DCPROD.LIB06,DISP=SHR
//              EXEC PGM=LFC27010
//FT06F001      DD SYSOUT=A
//FT05F001 DD UNIT=(CTC,,DEFER),DSNAME=&&ASPI0001,                   *
//   DISP=(OLD,DELETE),VOL=SER=010221,DCB=(LRECL=80,BLKSIZE=80,RECFM=F)
//
 IEF236I ALLOC. FOR LEC9016
 IEF237I 174   ALLOCATED TO JOBLIB
 IEF237I 6AF   ALLOCATED TO FT06F001
 IEF237I 6A2   ALLOCATED TO FT05F001
 IEF142I - STEP WAS EXECUTED - COND CODE 0000
 IEF285I   DCPROD.LIB06                                     PASSED
 IEF285I   VOL SER NOS= DNL002.
 IEF285I   SYS76124.T171015.RV001.LEC9016.ASPDA001          DELETED
 IEF285I   VOL SER NOS= ASP6AF.
 IEF285I   SYS76124.T171015.RV001.LEC9016.ASPI0001          DELETED
 IEF285I   VOL SER NOS= 010221.
 IEF373I STEP /          / START 76124.1715
 IEF374I STEP /          / STOP  76124.1715 CPU    0MIN 00.96SEC STOR VIRT 232K
$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
$                                                                                                                              $
$                                              PACES DATA ACQUISITION SYSTEM                                                   $
$                                                                                                                              $
* STEP NAME                    START TIME 17.15.25.20   MAIN CORE REQD   250 K   LCS CORE REQD    0 K   STEP CPU   00.00.00.96 *
* PGM NAME       LFC27010      STOP  TIME 17.15.45.78   MAIN CORE USED   232 K   LCS CORE USED    0 K   JOB  CPU   00.00.00.96 *
* DISPATCH PRTY  1             ELAP. TIME 00.00.20.58   MAIN CORE BORROW   0 K   LCS CORE BORRWD  0 K   CONDITION CODE    0000 *
*                                                                                                                              *
$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
$                                                        EXCP STATISTICS                                                       $
$                                                                                                                              $
$ UNIT   EXCP COUNT     UNIT   EXCP COUNT     UNIT   EXCP COUNT     UNIT   EXCP COUNT     UNIT   EXCP COUNT     UNIT   EXCP COUNT $
$                                                                                                                              $
$  304            0      6AF          376      6A2           47                                                                $
$                                                    EXCP TOTAL        423                                                     $
$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
 IEF374I STEP/           / TOTAL EXCP 000423
 IEF285I   DCPROD.LIB06                                     KEPT
 IEF285I   VOL SER NOS= DNL002.
 IEF375I   JOB /LEC9016 / START 76124.1715
```

PAGES DATA ACQUISITION SYSTEM

JOB LOG NUMBER = LEC9116 76124 17.1?.15.?3

PROGRAMMER	CHERN	DATE	05/03/76 76.124	INITIATION TIME	17.15.25.20
ACCTG DATA	0004270500277710CPLEC27616	CPU TIME	00.00.00.96	TERMINATION TIME	17.15.46.13
JOBNAME	LEC9116	PRIORITY	02	ELAPSED TIME	00.00.20.93
SYSTEM ID	58 = 5?	CLASS	A	COMPLETION STATUS	C0000

$$$

CHERN 00002705 0221 A LEC9016 FT 6F 01

LEC9016

JDB 0221

FT06F001

CHERN 00002705 0221 A LEC9016 FT 6F 01

AD-A164 421 STRUCTURAL CONCEPT ANALYSIS REPORT FOR THE EAST COAST AIR COMBAT MANEUVER..(U) CREST ENGINEERING INC TULSA OK MAY 76 27-771-92-APP-C CHES/NAVFAC-FPO-7601-APP-C 7/7

UNCLASSIFIED N62477-76-C-0179 F/G 13/13 NL

END
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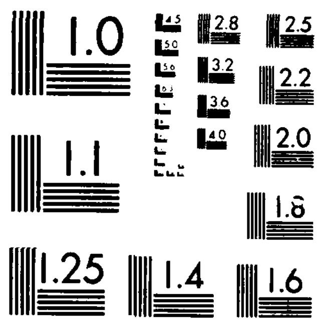

MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

LIST OF INPUT DATA -- ACCM WATER STR[illegible] -- [illegible] LISTING -- PILING   U.S. ARMY--C.ORPS

1	36.000	1.500	0.0	3	160.000	PILING
1	36.000	1.750	0.0	3	50.000	PILING
1	36.000	1.250	0.0	3	22.000	PILING

MATERIAL LISTING PROGRAM

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*****************************************************
*                                                   *
*              CREST OFFSHORE, I.C.                 *
*                                                   *
*                TULSA, OKLAHOMA                    *
*                                                   *
*                                                   *
*             CREATED IN APRIL 1974                 *
*              MODIFIED FEB 1975                    *
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ACRR 3-PILE STRUCTURE MATERIAL LISTING -- PILING   U.S.NAVY--C.CHERN

AE[illegible] 3-[illegible] STRUCT OF MATERIAL LISTING -- PILE [illegible] [illegible]

PIPE

NOMINAL DIMENSION (IN X IN)	QUANTITY	NUMBER OF [illegible] (FT)	TOTAL LENGTH (FT)	TOTAL WEIGHT (POUNDS)
36.000 O.D. X 1.750 WT	3	5[illegible]	150.00	96110.9
36.000 O.D. X 1.500 WT	3	16[illegible]	480.0[illegible]	265542.8
36.000 O.D. X 1.250 WT	3	22.	66.[illegible]	30647.3

TOTAL WEIGHT OF PIPE MEMBERS = 392300.9

TOTAL WEIGHT = 392300.9

BILL OF MATERIALS SUMMARY
ACMR 3-PILE STRUCTURE MATERIAL LISTING -- PILING   U.S. NAVY--C.CHERN

NOMINAL PIPE SIZE	TOTAL LENGTH (FEET)	TOTAL WEIGHT ([illegible])
PIPE		
36.000 O.D. X 1.750 WT	15[illegible].00	96[illegible].00
36.000 O.D. X 1.500 WT	488.00	2655[illegible].75
36.000 O.D. X 1.250 WT	66.00	3[illegible]647.25

TOTAL WEIGHT   392300.[illegible] LBS

LIST [illegible] -- [illegible] SAMPLE STR[illegible] [illegible] LISTING -- JACKET [illegible]

1	[illegible]	1.[illegible]	[illegible]	3	[illegible]	JACKET LEG JOINT CA[illegible]
1	[illegible]	1.[illegible]	[illegible]	3	[illegible]	JACKET LEG JOINT CA[illegible]
1	[illegible]	1.[illegible]	[illegible]	3	[illegible]	JACKET LEG JOINT CA
1	[illegible]	1.5[illegible]	[illegible]	3	21.2[illegible]	JACKET LEG SPLASH Z[illegible]
1	[illegible]	[illegible].5[illegible]	[illegible]	3	25.[illegible]	JACKET LEG
1	[illegible]	[illegible].5[illegible]	[illegible]	3	23.[illegible]	JACKET LEG
1	24.[illegible]	0.750	0.0	3	7.[illegible]	JACKET BRACE JT CA[illegible]
1	18.[illegible]	0.500	[illegible]	6	25.5[illegible]	JKT HORI. BRACE 1ST
1	14.[illegible]	0.375	[illegible]	3	[illegible]	JKT HORI. BRACE 1ST
1	16.[illegible]	[illegible].5[illegible]	[illegible]	6	[illegible]	JKT VERT. BRACE 1ST
1	18.[illegible]	0.500	[illegible]	6	[illegible].35[illegible]	JKT HORI. BRACE 2[illegible]
1	13.000	0.375	[illegible]	3	21.380	JKT HORI. BRACE 2ND
1	20.000	0.625	0.0	3	54.600	JKT VERT. BRACE 2ND
1	12.750	0.500	0.0	6	19.770	JKT HORI. BRACE 3RD
1	12.750	0.375	0.0	3	19.770	JKT HORI. BRACE 3RD
1	2[illegible]	[illegible].625	[illegible]	3	13.[illegible]	JKT VERT. BRACE 3RD
1	20.000	1.000	[illegible]	3	13.800	JKT VERT. BRACE 3RD
1	16.000	0.500	[illegible]	6	15.150	JKT HORI. BRACE 4TH
1	12.750	0.500	[illegible]	3	15.150	JKT HORI. BRACE 4TH

MATERIAL LISTING ... [illegible]

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CREST [illegible], I.C.

TULSA, OKLAHOMA

CREATED [illegible] APRIL 1974
MODIFIED FEB 1975

ACMR 3-PILE STRUCTURE MATERIAL LISTING -- JACKET [illegible] S. NAVY--C. CHERO[illegible]

ACMR MOBILE STRUCTURE MATERIAL LISTING -- DRAFT [illegible]

[illegible]

NOMINAL SIZE AT (IN X IN)	QUANTITY	PIECE LENGTH (FT)	TOTAL LENGTH (FT)	TOTAL WEIGHT (POUNDS)
42.000 O.D. X 1.500 WT	3	21.20	63.60	41335.4
41.000 O.D. X 1.000 WT	3	18.[illegible]	54.[illegible]	25[illegible].7
41.000 O.D. X 1.000 WT	3	[illegible]	30.00	12[illegible].2
41.000 O.D. X 1.000 WT	3	[illegible]	18.00	76[illegible].9
30.000 O.D. X 0.510 WT	3	25.[illegible]	76.32	16113.8
40.000 O.D. X 0.500 WT	3	23.[illegible]	70.32	14[illegible].6
24.000 O.D. X 0.750 WT	3	7.[illegible]	21.00	3910.6
23.000 O.D. X 1.3[illegible] WT	3	13.[illegible]	41.45	[illegible]8.0
20.000 O.D. X 0.625 WT	3	[illegible]	163.80	212[illegible]
20.000 O.D. X 0.625 WT	3	1[illegible]	3[illegible]	[illegible]5.5
18.000 O.D. X 0.500 WT	6	25.50	153.00	10311.0
18.000 O.D. X 0.500 WT	6	24.38	146.26	13682.8
16.000 O.D. X 0.500 WT	6	40.00	240.00	19863.6
16.000 O.D. X 0.500 WT	6	15.15	90.90	7530.0
14.000 O.D. X 0.375 WT	3	29.[illegible]	87.66	4751.9
14.000 O.D. X 0.375 WT	3	24.38	73.14	39[illegible].9
12.750 O.D. X 0.500 WT	6	19.77	118.62	7766.9
12.750 O.D. X 0.500 WT	3	15.15	45.45	2975.9
12.750 O.D. X 0.375 WT	3	19.77	59.31	2902.3

TOTAL WEIGHT OF THE MEMBERS = 231131.4

TOTAL WEIGHT = 231130.4

BILL OF MATERIALS SUMMARY
ACMW 3-PILE STRUCTURE MATERIAL LISTING -- [illegible] [illegible]S. A[illegible]

NOMINAL DIMENSIONS	TOTAL LENGTH (FEET)	TOTAL WEIGHT ([illegible])
PIPE		
42.000 O.D. x 1.500 WT	65.60	[illegible]
41.000 O.D. x 1.000 WT	102.[illegible]	[illegible]5615.71
40.000 O.D. x 0.500 WT	146.59	[illegible]
24.000 O.D. x 0.750 WT	21.[illegible]	5014.59
20.000 O.D. x 1.000 WT	41.40	8408.85
20.000 O.D. x 0.625 WT	193.80	25[illegible]87.57
18.000 O.D. x 0.500 WT	299.28	[illegible]
16.000 O.D. x 0.500 WT	339.01	[illegible].55
14.000 O.D. x 0.375 WT	160.14	8706.81
12.750 O.D. x 0.500 WT	164.07	10742.81
12.750 O.D. x 0.375 WT	59.51	2902.50

TOTAL WEIGHT 231130.44 LBS

LIST OF INPUT DATA -- [illegible] SUBSTRUCTURE -- [illegible]

1	36.[illegible]	1.25[illegible]	[illegible].0	3	57.000	SUPER-STRUCTURE LEGS
1	12.750	.5[illegible]	0.0	3	29.000	SUPER-STRUCTURE BRAC
1	12.75[illegible]	.5[illegible]	[illegible]	3	32.[illegible]	SUPER-STRUCTURE BRAC
1	12.75[illegible]	.375	[illegible]	2	1[illegible].[illegible]	SUPER-STRUCTURE BRAC
1	6.625	.25[illegible]	[illegible]	2	[illegible].[illegible]	SUPER-STRUCTURE BRAC
2	18.[illegible]	5[illegible].[illegible]	[illegible]	3	29.[illegible]	FOOTPRINT DECK
2	8.[illegible]	2[illegible].[illegible]	0.0	2	25.[illegible]	FOOTPRINT DECK
2	8.[illegible]	2[illegible].[illegible]	[illegible]	1	2[illegible].[illegible]	FOOTPRINT DECK
3	2[illegible].[illegible]	25.[illegible]	[illegible].25[illegible]	1	[illegible]	FOOTPRINT DECK
2	18.[illegible]	5[illegible].[illegible]	[illegible]	[illegible]	55.[illegible]	TOP DECK
2	12.[illegible]	27.[illegible]	[illegible]	[illegible]	55.[illegible]	TOP DECK
2	6.[illegible]	15.50[illegible]	0.0	2	29.0[illegible]	TOP DECK
6	12.[illegible]	25.[illegible]	0.0	4	35.000	TOP DECK
6	12.[illegible]	25.[illegible]	0.0	4	5.000	TOP DECK
3	[illegible].33[illegible]	5.75[illegible]	[illegible].375	57	[illegible]	TOP DECK
3	35.[illegible]	35.[illegible]	[illegible].25[illegible]	1	[illegible]	TOP DECK
3	[illegible].[illegible]	[illegible].[illegible]	1.[illegible]	12	[illegible]	SHIPS

MATERIAL LISTING CF CRA

CREST OFFSHORE, INC.

TULSA, OKLAHOMA

CREATED 15 APRIL 1974
MODIFIED FEB 1975

ACTR 3-PILE STRUCTURE MATERIAL LISTING -- SUPPORTING [illegible] U.S. NAVY--C.CLER[illegible]

ACMR 3-PILE STRUCTURE MATERIAL LISTING -- SUPERSTRUCTURE [illegible] U.S.NAVY--[illegible]

PIPE

NOMINAL DIMENSION (IN X IN)	QUANTITY	MEMBER LENGTH (FT)	TOTAL LENGTH (FT)	TOTAL WEIGHT (POUNDS)
36.000 O.D. X 1.250 WT	3	57.00	171.00	79404.2
12.750 O.D. X 0.500 WT	3	32.65	97.95	6413.5
12.750 O.D. X 0.500 WT	3	29.00	87.00	5696.5
12.750 O.D. X 0.375 WT	2	18.00	36.00	1785.9
6.625 O.D. X 0.280 WT	2	9.00	18.00	341.9

TOTAL WEIGHT OF PIPE MEMBERS = 93641.8

ACMR 3-PILE STRUCTURE MATERIAL LISTING -- SUPERSTRUCTURE [illegible] U.S. NAVY--C.E.L.

[illegible] SHAPE

NOMINAL DIMENSIONS	QUANTITY	MEMBER LENGTH (FEET)	TOTAL LENGTH (FEET)	TOTAL WEIGHT (POUNDS)
W 18 X 50.00	4	35.00	140.00	7000.0
W 18 X 50.00	3	29.	87.00	4350.0
W 12 X 27.00	4	35.	140.00	3780.0
W 8 X 24.00	2	25.	50.00	1200.0
W 8 X 24.00	10	21.00	200.00	4800.0
W 6 X 15.50	2	29.00	58.00	899.0

TOTAL WEIGHT OF W-SHAPE MEMBERS= 22029.0

ACME 3-PILE STRUCTURE MATERIAL LISTING -- SUPERSTRUCTURE [illegible] U.S.ARMY-C.OF E.

PLATE

NOMINAL DIMENSION (FT X FT X IN)	QUANTITY	TOTAL AREA (SQ. FT)	TOTAL WEIGHT (POUNDS)
0.42 X 0.85 X 1.000	12	4.18	170.8
0.33 X 5.75 X 0.375	57	[illegible].16	1656.2
35.00 X 35.00 X 0.250	1	1225.00	12505.2
20.00 X 25.00 X 0.25	1	500.00	5106.2

TOTAL WEIGHT OF PLATES = 19456.3

ACME 3-PILE STRUCTURE MATERIAL LISTING -- SUPERSTRUCTURE OF U.S. NAVY--[illegible]

CHANNELS

NOMINAL DIMENSION	QUANTITY	MEMBER LENGTH (FT)	TOTAL LENGTH (FT)	TOTAL WEIGHT (POUNDS)
C 12 X 25.00	4	35.00	140.00	3500.0
C 12 X 25.00	4	3.00	12.00	300.0

TOTAL WEIGHT OF CHANNELS = 3800.0

TOTAL WEIGHT = 138907.1

BILL OF MATERIALS SUMMARY
ACHB 3-PILE STN CTORE MATERIAL LISTING -- SUPERSTRUCTURE [illegible] U.S. ARMY--[illegible]

MATERIAL DIMENSION	TOTAL LENGTH (FEET)	TOTAL WEIGHT ([illegible])
PIPE		
36.000 O.D. x 1.250 WT	171.00	79[illegible]4.19
12.750 O.D. x 0.500 WT	184.95	121[illegible].97
12.750 O.D. x 0.375 WT	36.00	1785.32
6.625 O.D. x 0.280 WT	18.00	[illegible]1.86
W SHAPE		
W 18 X 50.00	227.00	11350.00
W 12 X 27.00	140.00	3780.00
W 8 X 24.00	250.00	6[illegible]0.00
W 6 X 15.50	58.00	[illegible]9.00
CHANNELS		
C 12 X 25.00	152.00	3800.00

BILL OF MATERIALS SUMMARY

ACMR 3-PIER STRUCTURE MATERIAL LISTING -- SUPERSTRUCTURE .S. ALVE[illegible]CHERR

PLATE

1.000 THICKNESS	4.18	17[illegible].81
0.375 THICKNESS	108.16	1[illegible]5[illegible].16
0.250 THICKNESS	1725.16	17[illegible].37

TOTAL WEIGHT 13[illegible]7.13 LBS

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ASP JOB NO. = 0221                                          DATE = 76.126

//LEC9016 JOB (0E4427050277710 [illegible]) [illegible],CLASS=A,C0221

ELAPSED TIME IN MAIN = [illegible]        = 000.42, START TIME = 17.18.06

DDNAME = SYSMSG                     PRINTED ON [illegible]27PR1, LINES = 000077
DDNAME = FT06F001                   PRINTED ON [illegible]27PR1, LINES = 000376
LINES OUTPUT FOR THIS JOB = 000453

CARDS FROM MAIN FOR THIS JOB = NONE
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END

FILMED

4-86

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